MAKING MODERN LIVING POSSIBLE

Service Manual

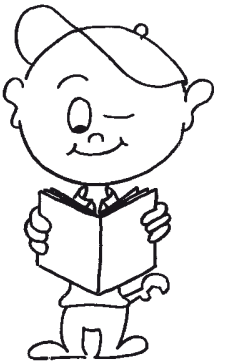
DANFOSS
BURNER COMPONENTS

Dear Danfoss partner,

In the field of components for burners and boilers, Danfoss offers a complete range for most oil burners on the market, right from the smallest domestic burners to the largest industrial burners. The construction of burners available today varies widely; therefore a high degree of adaptability is demanded from the individual components.

An example: The new series of BFP service pumps from Danfoss give the greatest possible flexibility where the range of functions and connections is concerned. These pumps are therefore ideal as replacement units for both older Danfoss pumps and pumps from other makers. If you would like precise details of how pump replacement can be simplified - please read on.

Danfoss will of course be pleased to help with the conversions outlined in this service manual and make the work of finding an alternative easier.
In other words, we will make it as easy as possible for you to find the most suitable components and service from the comprehensive Danfoss range.



The service manual is intended as an aid in the daily routine. We therefore hope that the manual will make your work with Danfoss burner components easier so that we will be able to look forward to your continued custom.

Your Danfoss Team

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Oil pumps

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Oil pump conversion

The tables below give the following pump conversions:

- Danfoss RS pumps to RSA pumps
- Danfoss RSL/MSL/MS/BFP pumps to BFP service pumps
- Suntec pumps to BFP service pumps
- Eckerle pumps to BFP service pumps
- Delta pumps to BFP service pumps

Using Danfoss service pumps BFP 21 L3 and BFP 21 R3 it is possible to maintain 90% of existing small burners. In other cases it can be difficult to find the correct Danfoss service pump. The main purpose of the conversion tables is to make the replacement of such pumps easier.

The tables are compiled as follows:

- Column 1 always gives the pump type to be replaced.

- Column 2 gives the code number of the pump to be replaced.

  Note: Where Eckerle UNI-pumps are concerned, column 1 gives the old and column 2 the new designation.

- Column 3 states whether the pump is for 1-pipe or 2-pipe operation.

  Note: With the MS pump, the numbers „1 + 2“ are added because this particular unit has automatic changeover. Eckerle pumps have no suffixes.

- Column 5 gives the Danfoss pump type able to replace the existing pump.

- Column 6 gives the corresponding Danfoss code number.

- The last column, „Comments/accessories“, refers to special characteristics and features. Please note that in some cases accessories are necessary.

Explanation - code number and comments:

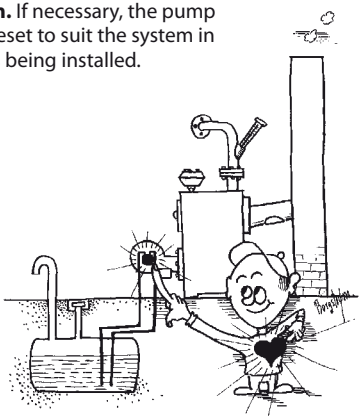
When changing over from pumps with hydraulic shut-off valve (RSL and MSLC) to BFP with electric shut-off valve (BFP 11, 21 and 41) a cable must be ordered for connection to the motor terminals in the oil burner control.

Some pump types carry the comment „No repl.". There are several possible explanations, among them:

- The BFP service pump cannot supply the required nozzle capacity.
- The BFP service pump does not have the required coil voltage. BFP coils are only available for 220-240 V a.c., 110-120 V a.c. and 24 V a.c.
- The shaft of the BFP service pump is not of a suitable diameter.
- With the BFP service pump it is possible that a hydraulic cylinder might be connected to the pressure gauge port on the front.

The position of connections and clockwise/counterclockwise indication are always given when looking on the shaft end. See ill. on page 54-65).

Before fitting a service pump, a check must be made of whether it is set for 1-pipe or 2-pipe operation. If necessary, the pump must be reset to suit the system in which it is being installed.



Oil pumps – Danfoss RS

Danfoss oil pumps - older series			➨	Relevant Danfoss types		
Type	Code no.	1-2 pipe	➨	Type	Code no.	Comments/accessories
RS 28	070-5300	1	➨	RSA 28	070-5370	
RS 28	070L5300	1	➨	RSA 28	070L5370	
RS 28	070-5302	2	➨	RSA 28	070-5372	
RS 28	070L5302	2	➨	RSA 28	070L5372	
RS 28	070-5310	1	➨	RSA 28	070-5380	
RS 28	070L5310	1	➨	RSA 28	070L5380	
RS 28	070-5312	2	➨	RSA 28	070-5382	
RS 28	070L5312	2	➨	RSA 28	070L5382	
RS 28	070-5322	2	➨	RSA 28	070-5332	
RS 28	070L5322	2	➨	RSA 28	070L5332	
RS 40	070-3200	1	➨	RSA 40	070-3230	
RS 40	070L3200	1	➨	RSA 40	070L3230	
RS 40	070-3202	2	➨	RSA 40	070-3232	
RS 40	070L3202	2	➨	RSA 40	070L3232	
RS 40	070-3210	1	➨	RSA 40	070-3240	
RS 40	070L3210	1	➨	RSA 40	070L3240	
RS 40	070-3212	2	➨	RSA 40	070-3242	
RS 40	070L3212	2	➨	RSA 40	070L3242	
RS 40	070-3222	2	➨	RSA 40	070-3249	
RS 40	070L3222	2	➨	RSA 40	070L3249	
RS 60	070-3300	1	➨	RSA 60	070-3350	
RS 60	070L3300	1	➨	RSA 60	070L3350	
RS 60	070-3302	2	➨	RSA 60	070-3352	
RS 60	070L3302	2	➨	RSA 60	070L3352	

Oil pumps – Danfoss RS

Danfoss oil pumps - older series			➡	Relevant Danfoss types		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
RS 60	070-3310	1	➡	RSA 60	070-3360	
RS 60	070L3310	1	➡	RSA 60	070L3360	
RS 60	070-3312	2	➡	RSA 60	070-3362	
RS 60	070L3312	2	➡	RSA 60	070L3362	

Oil pumps – Danfoss RSL

Danfoss oil pumps - older series			➡	Relevant Danfoss types		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
RSL 028	070-4330	1	➡	BFP 21 R3	071N0157[1)]	
RSL 028	070L4330	1	➡	BFP 21 L3	071N0156[1)]	+ cable, L = 710 mm: 071G0204
RSL 028	070-4332	2	➡	BFP 21 R3	071N0171[1) 5)]	
RSL 028	070L4332	2	➡	BFP 21 L3	071N0170[1) 5)]	
RSL 028	070-4340	1	➡	BFP 21 R3	071N0157[1)]	
RSL 028	070L4340	1	➡	BFP 21 L3	071N0156[1)]	+ cable, L = 710 mm: 071G0204
RSL 028	070-4342	2	➡	BFP 21 R3	071N0171[1) 5)]	+ bush ∅54: 071B0011
RSL 028	070L4342	2	➡	BFP 21 L3	071N0170[1) 5)]	
RSL 050	070-3130	1	➡	BFP 21 R5	071N0173[1)]	
RSL 050	070L3130	1	➡	BFP 21 L5	071N0172[1)]	+ cable, L = 710 mm: 071G0204
RSL 050	070-3132	2	➡	BFP 21 R5	071N0173[1)]	
RSL 050	070L3132	2	➡	BFP 21 L5	071N0172[1)]	
RSL 050	070-3140	1	➡	BFP 21 R5	071N0173[1)]	
RSL 050	070L3140	1	➡	RFP 21 L5	071N0172[1)]	+ cable, L = 710 mm: 071G0204
RSL 050	070-3142	2	➡	BFP 21 R5	071N0173[1)]	+ bush ∅54: 071B0011
RSL 050	070L3142	2	➡	BFP 21 L5	071N0172[1)]	

1) The solenoid coil must be connected in parallel with the burner motor.
5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Danfoss RSLB

Danfoss oil pumps - older series			➡	Relevant Danfoss types		
Type	Code no.	1-2 pipe	➡	Type	Code no.	Comments/accessories
RSLB 028	070-4030	1	➡	BFP 20 R3	071N0169	
RSLB 028	070L4030	1	➡	BFP 20 L3	071N0168	
RSLB 028	070-4032	2	➡	BFP 20 R3	071N0169	
RSLB 028	070L4032	2	➡	BFP 20 L3	071N0168	
RSLB 028	070-4040	1	➡	BFP 20 R3	071N0169	+ bush Ø54: 071B0011
RSLB 028	070L4040	1	➡	BFP 20 L3	071N0168	
RSLB 028	070-4042	2	➡	BFP 20 R3	071N0169	
RSLB 028	070L4042	2	➡	BFP 20 L3	071N0168	
RSLB 050	070-4130	1	➡	BFP 20 R5	071N0129	
RSLB 050	070L4130	1	➡	BFP 20 L5	071N0126	
RSLB 050	070-4132	2	➡	BFP 20 R5	071N0129	
RSLB 050	070L4132	2	➡	BFP 20 L5	071N0126	
RSLB 050	070-4140	1	➡	BFP 20 R5	071N0129	+ bush Ø54: 071B0011
RSLB 050	070L4140	1	➡	BFP 20 L5	071N0126	
RSLB 050	070-4142	2	➡	BFP 20 R5	071N0129	
RSLB 050	070L4142	2	➡	BFP 20 L5	071N0126	

Oil pumps – Danfoss MSLA

Danfoss oil pumps - older series			➡	Relevant Danfoss types				
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**		
MSLA 032	071B0101	1	➡	BFP 21 R3	071N0157			
MSLA 032	071B0102	2	➡	BFP 21 R3	071N0171[5)]			
MSLA 032	071B0103	1	➡	BFP 21 R3	071N0157	MSLA = 100 V a.c.	+ coil 110-120 V a.c.: 071N0061	
MSLA 032	071B0104	2	➡	BFP 21 R3	071N0171[5)]			
MSLA 032	071B0105	1	➡	BFP 21 R3	071N0157	+ coil 110-120 V a.c.: 071N0061		
MSLA 032	071B0108	2	➡	BFP 21 R3	071N0171	MSLA = 200 V a.c.		
MSLA 032	071B0112	2	➡	BFP 21 R3	071N0171[5)]			
MSLA 032	071B0113	1	➡	BFP 21 R3	071N0157			
MSLA 032	071B0132	2	➡	BFP 21 R3	071N0171[5)]	+ coil 24 V a.c.: 071N0062		
MSLA 032	071B1101	1	➡	BFP 21 L3	071N0156			+ cable, L = 710 mm: 071G0204
MSLA 032	071B1102	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1103	1	➡	BFP 21 L3	071N0156	MSLA = 100 V a.c.	+ coil 110-120 V a.c.: 071N0061	
MSLA 032	071B1104	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1105	1	➡	BFP 21 L3	071N0156	+ coil 110-120 V a.c.: 071N0061		
MSLA 032	071B1111	1	➡	BFP 21 L3	071N0156			
MSLA 032	071B1112	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1114	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1118	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1120	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1126	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1128	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1132	2	➡	BFP 21 L3	071N0170[5)]	+ coil 24 V a.c.: 071N0062		
MSLA 032	071B1134	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1136	2	➡	BFP 21 L3	071N0170[5)]			
MSLA 032	071B1138	2	➡	BFP 21 L3	071N0170[5)]			

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Danfoss MSLA/MSLB

Danfoss oil pumps - older series			➡	Relevant Danfoss types				
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**		
MSLA 050	071B0201	1	➡	BFP 21 R5	071N0173			
MSLA 050	071B0202	2	➡	BFP 21 R5	071N0173			
MSLA 050	071B0203	1	➡	BFP 21 R5	071N0173	MSLA = 100 V a.c.	+ coil 110-120 V a.c.: 071N0061	
MSLA 050	071B0204	2	➡	BFP 21 R5	071N0173			
MSLA 050	071B0205	1	➡	BFP 21 R5	071N0173	+ coil 110-120 V a.c.: 071N0061		+ cable, L = 710 mm, 071G0204
MSLA 050	071B0208	2	➡	BFP 21 R5	071N0173	MSLA = 200 V a.c.		
MSLA 050	071B1201	1	➡	BFP 21 L5	071N0172			
MSLA 050	071B1202	2	➡	BFP 21 L5	071N0172			
MSLA 050	071B1203	1	➡	BFP 21 L5	071N0172	MSLA = 100 V a.c.	+ coil 110-120 V a.c.: 071N0061	
MSLA 050	071B1204	2	➡	BFP 21 L5	071N0172			
MSLB 032	071B2101	1	➡	BFP 20 R3	071N0169			
MSLB 032	071B3101	1	➡	BFP 20 L3	071N0168			
MSLB 032	071B2102	2	➡	BFP 20 R3	071N0169			
MSLB 032	071B2104	2	➡	BFP 20 R3	071N0169			
MSLB 032	071B3102	2	➡	BFP 20 L3	071N0168			
MSLB 050	071B2201	1	➡	BFP 20 R5	071N0129			
MSLB 050	071B3201	1	➡	BFP 20 L5	071N0126			
MSLB 050	071B2202	2	➡	BFP 20 R5	071N0129			
MSLB 050	071B2203	1	➡	BFP 20 R5	071N0129			
MSLB 050	071B3202	2	➡	BFP 20 L5	071N0126			

Oil pumps – MSLC/MSLD

Danfoss oil pumps - older series			➡	Relevant Danfoss types		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
MSLC 032	071B4101	1	➡	BFP 21 R3	071N0157[1)]	
MSLC 032	071B5101	1	➡	BFP 21 L3	071N0156[1)]	+ cablel, L = 710 mm: 071G0204
MSLC 032	071B4102	2	➡	BFP 21 R3	071N0171[1) 5)]	
MSLC 032	071B5102	2	➡	BFP 21 L3	071N0170[1) 5)]	
MSLC 032	071B4103	1	➡	BFP 21 R3	071N0171[1)]	
MSLC 032	071B4105	1	➡	BFP 21 R3	071N0157[1)]	
MSLC 050	071B4201	1	➡	BFP 21 R5	071N0173[1)]	+ cable, L = 710 mm: 071G0204
MSLC 050	071B5201	1	➡	BFP 21 L5	071N0172[1)]	
MSLC 050	071B4202	2	➡	BFP 21 R5	071N0173[1)]	
MSLC 050	071B5202	2	➡	BFP 21 L5	071N0172[1)]	
MSLD 032	071B6101	1	➡	BFP 20 R3	071N0169	
MSLD 032	071B6102	2	➡	BFP 20 R3	071N0169	
MSLD 032	071B7101	1	➡	BFP 20 L3	071N0168	
MSLD 032	071B7102	2	➡	BFP 20 L3	071N0168	
MSLD 032	071B6201	1	➡	BFP 20 R5	071N0129	
MSLD 050	071B6202	2	➡	BFP 20 R5	071N0129	
MSLD 050	071B7201	1	➡	BFP 20 L5	071N0126	
MSLD 050	071B7202	2	➡	BFP 20 L5	071N0126	

1) The solenoid coil must be connected in parallel with the burner motor.
5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Danfoss MS

Danfoss oil pumps - older series			➡	Relevant Danfoss types		
Type	Code no.	1-2 pipe	➡	Type	Code no.	Comments/accessories
MS 10 L3	071G0125	1 + 2	➡	BFP 20 L3	071R0168	
MS 10 R3	071G0123	1 + 2	➡	BFP 20 R3	071R0169	
MS 10 L3	071G0153	1 + 2	➡		No repl.	Bentone Viscomin
MS 10 R3	071G0175	1 + 2	➡	BFP 20 R3	071N0169	
MS 10 R5	071G0176	1 + 2	➡	BFP 20 R5	071N0129	
MS 10 L5	071G0128	1 + 2	➡	BFP 20 L5	071N0126	
MS 10 R5	071G0124	1 + 2	➡	BFP 20 R5	071N0129	
MS 11 L3	071G0117	1 + 2	➡	BFP 21 L3	071N0170[5)]	
MS 11 R3	071G0118	1 + 2	➡	BFP 21 R3	071N0171[5)]	
MS 11 L3	071G0121	1 + 2	➡	BFP 21 L3	071N0170[5)]	
MS 11 L3	071G0134	1 + 2	➡	BFP 21 L3	071N0170[5)]	
MS 11 L3	071G0137	1 + 2	➡	BFP 21 L3	071N0170[5)]	
MS 11 L3	071G0139	1 + 2	➡	BFP 21 L3	071N0170[5)]	
MS 11 L3	071G0154	1 + 2	➡	BFP 21 L3	071N0170[5)]	+ coupling with single flat in hole (D-shaped)
MS 11 L3	071G0156	1 + 2	➡	BFP 21 L3	071N0170[5)]	+ coil 24 V a.c.: 071N0062
MS 11 L3	071G0158	1 + 2	➡	BFP 21 L3	071N0170[5)]	
MS 11 R3	071G0160	1 + 2	➡	BFP 21 R3	071N0171[5)]	+ coil 24 V a.c.: 071N0062
MS 11 L3	071G0162	1 + 2	➡	BFP 11 L3	071N0156	
MS 11 L3	071G0163	1 + 2	➡	BFP 11 L3	071N0156	+ coil 24 V a.c.: 071N0062
MS 11 L3	071G0165	1	➡	BFP 21 L3	071N0156	
MS 11 R3	071G0173	1 + 2	➡	BFP 21 R3	071N0171[5)]	
MS 11 R5	071G0174	1 + 2	➡	BFP 21 R5	071N0173	
MS 11 R3	071G0177	1 + 2	➡	BFP 21 R3	071N0171[5)]	
MS 11 L3	071G0178	1 + 2	➡	BFP 21 L3	071N0170	

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Danfoss MS

Danfoss oil pumps - older series			➡	Relevant Danfoss types		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
MS 11 L3	071G0179	1 + 2	➡	BFP 21 L3	071N0170[5)]	Any hydraulic cylinder must be connected to the pressure gauge port on the front.
MS 11 L5	071G0127	1 + 2	➡	BFP 21 L5	071N0172	
MS 11 R5	071G0126	1 + 2	➡	BFP 21 R5	071N0173	
MS 12 L3	071G0115	1 + 2	➡	BFP 53 L6	071N6213	MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar
MS 12 R3	071G0113	1 + 2	➡	BFP 53 R6	071N6228	MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar
MS 12 L5	071G0116	1 + 2	➡	BFP 53 L6	071N6213	MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar
MS 12 R5	071G0114	1 + 2	➡	BFP 53 R6	071N6228	MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar
MS 12 L3	071G0161	1 + 2	➡	BFP 53 L6	071N6213	MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar
MS 12E L3	071G0130	1 + 2	➡	BFP 52E L3	071N2201	
MS 12E R3	071G0129	1 + 2	➡	BFP 52E R3	071N2203	
MS 12E L5	071G0120	1 + 2	➡	BFP 52E L5	071N2202	
MS 12E R5	071G0119	1 + 2	➡	BFP 52E R5	071N2204	
MS 12E L3	071G0140	1 + 2	➡	BFP 52E L3	071N2201	
MS 12E L5	071G0181	1 + 2	➡	BFP 52E L5	071N2202	
MS 21 L3	071G0157	1 + 2	➡	BFP 21 L3	071N0170[5)]	
MS 21 R3	071G0167	1 + 2	➡	BFP 21 R3	071N0171[5)]	

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Danfoss BFP

BFP				BFP-Service pumps		
Type	Code no.	1-2 pipe		Type	Code no.	Comments/accessories
BFP 11 L3	071N0101	2	➡	BFP 11 L3	071N0141[3) 7)]	
BFP 21 L3	071N0102	2	➡	BFP 21 L3	071N0170[5)]	
BFP 11 L3	071N0103	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 L3	071N0104	2	➡	BFP 21 L3	071N0170[5)]	
BFP 11 L5	071N0105	2	➡	BFP 21 L5	071N0172	
BFP 21 L3	071N0107	2	➡	BFP 21 L3	071N0170[5)]	
BFP 20 L3	071N0108	1	➡	BFP 20 L3	071N0168	
BFP 21 R3	071N0109	2	➡	BFP 21 R3	071N0171[5)]	Any hydraulic cylinder must be connected to the pressure gauge port on the front.
BFP 21 L3	071N0111	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 R3	071N0112	2	➡	BFP 21 R3	071N0171[5)]	
BFP 21 L3	071N0113	2	➡	BFP 21 L3	071N0170[5)]	
BFP 11 L3	071N0114	2	➡	BFP 21 L3	071N0170[5)]	+ coupling with single flat (D-shaped)
BFP 31 L3	071N0115	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 L5	071N0116	2	➡	BFP 21 L5	071N0172	Any hydraulic cylinder must be connected to the pressure gauge port on the front.
BFP 20 R3	071N0118	1	➡	BFP 20 R3	071N0169	
BFP 21 L3	071N0119	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 R5	071N0120	1	➡	BFP 21 R5	071N0173	
BFP 21 L3	071N0122	1	➡	BFP 21 L3	071N0156	
BFP 21 L3	071N0123	2	➡	BFP 21 L3	071N0170[5)]	+ coil 110 V: 071N0061
BFP 20 L3	071N0125	2	➡	BFP 20 L3	071N0168	
BFP 20 L5	071N0126	2	➡	BFP 20 L5	071N0126	
BFP 20 L3	071N0127	1	➡	BFP 20 L3	071N0168	
BFP 20 R3	071N0128	1	➡	BFP 20 L3	071N0169	

3) A screw for 2-pipe operation is fitted under the cover of these pumps. Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation (see page 54-55)

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171. 7) Supplied as a 1-pipe only.

Oil pumps – Danfoss BFP

BFP			➡	BFP-Service pumps		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
BFP 20 R5	071N0129	2	➡	BFP 20 R5	071N0129	
BFP 21 L3	071N0130	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 L3	071N0132	1	➡	BFP 21 L3	071N0156	
BFP 31 L3	071N0133	2	➡	BFP 21 L3	071N0170[5)]	+ coupling with single flat (D-shaped)
BFP 41 L3	071N0135	2	➡	BFP 41 L3	071N0174	
BFP 21 R3	071N0136	1	➡	BFP 21 R3	071N0157	
BFP 41 R3	071N0137	2	➡	BFP 21 R3	071N0157	
BFP 11 L3	071N0141[3)]	1	➡	BFP 21 L3	071N0141[3)]	
BFP 11 L3	071N0142[3)]	1	➡	BFP 21 L3	071N0141[3)]	
BFP 11 R3	071N0143[3)]	1	➡	BFP 21 R3	071N0155[3)]	
BFP 11 L3	071N0144[3)]	2	➡	BFP 21 L3	071N0141[3) 7)]	
BFP 11 R3	071N0145[3)]	2	➡	BFP 21 R3	071N0155[3) 7)]	
BFP 11 L3	071N0146[3)]	2	➡	BFP 11 L3	071N0141[3) 7)]	Old coil might be usable
BFP 21 L3	071N0147	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 L3	071N0148	2	➡	BFP 21 L3	071N0170[5)]	
BFP 31 L3	071N0149	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 L3	071N0150	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 L3	071N0151	2	➡	BFP 21 L3	071N0170[5)]	
BFP 11 L3	071N0152[3)]	2	➡	BFP 21 L3	071N0141[3) 7)]	
BFP 11 L3	071N0153[3)]	2	➡	BFP 21 L3	071N0141[3) 7)]	+ coil 24 V a.c.: 071N0062
BFP 21 R3	071N0154	1	➡	BFP 21 R3	071N0157	
BFP 11 R3	071N0155[3)]	1	➡	BFP 21 R3	071N0155[3)]	
BFP 21 L3	071N0156	1	➡	BFP 21 L3	071N0156	
BFP 21 R3	071N0157	1	➡	BFP 21 R3	071N0157	
BFP 21 L5	071N0158	1	➡	BFP 21 L5	071N0172	
BFP 21 R5	071N0159	1	➡	BFP 21 R5	071N0173	

3) A screw for 2-pipe operation is fitted under the cover of these pumps. Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation (see page 54-55).
5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.
7) Supplied as a 1-pipe only.

Oil pumps – Danfoss BFP

BFP			➡	BFP-Service pumps		
Type	Code no.	1-2 pipe	➡	Type	Code no.	Comments/accessories
BFP 41 L3	071N0160	1	➡	BFP 41 L3	071N0160	
BFP 20 L3	071N0161	1	➡	BFP 20 L3	071N0168	
BFP 20 R3	071N0162	1	➡	BFP 20 R3	071N0169	
BFP 11 R5	071N0163	2	➡	BFP 21 R5	071N0173	
BFP 21 L3	071N0164	2	➡	BFP 21 L3	071N0170[5)]	
BFP 11 R5	071N0165	2	➡	BFP 21 R5	071N0173	
BFP 10 R5	071N0166	2	➡	BFP 20 R5	071N0129	
BFP 21 R3	071N0167	2	➡	BFP 21 R3	071N0171[5)]	
BFP 20 L3	071N0168	2	➡	BFP 20 L3	071N0168	
BFP 20 R3	071N0169	2	➡	BFP 20 R3	071N0169	
BFP 21 L3	071N0170	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 R3	071N0171	2	➡	BFP 21 R3	071N0171[5)]	
BFP 21 L5	071N0172	2	➡	BFP 21 L5	071N0172	
BFP 21 R5	071N0173	2	➡	BFP 21 R5	071N0173	
BFP 41 L3	071N0174	2	➡	BFP 41 L3	071N0174	
BFP 21 L3	071N0175	1	➡	BFP 21 L3	071N0156	
BFP 21 L3	071N0176	1	➡	BFP 21 L3	071N0156	+ coil: 071N0061
BFP 10 R3	071N0177	2	➡	BFP 20 R3	071N0169	
BFP 11 L5	071N0178	2	➡	BFP 21 L5	071N0172	
BFP 21 L3	071N0179	2	➡	BFP 21 L3	071N0170[5)]	
BFP 20 R5	071N0180	2	➡	BFP 20 R5	071N0129	
BFP 11 R3	071N0181	2	➡	BFP 11 R3	071N0155[3)]	
BFP 21 L3	071N0182	2	➡	BFP 21 L3	071N0170[5)]	
BFP 11 R3	071N0183	2	➡	BFP 11 R3	071N0155[3)]	
BFP 11 L3	071N0184	2	➡	BFP 11 L3	071N0141[3)]	

3) A screw for 2-pipe operation is fitted under the cover of these pumps.
Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation.
5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Danfoss BFP

BFP			➡	BFP-Service pumps		
Type	Code no.	1-2 pipe	➡	Type	Code no.	Comments/accessories
BFP 21 L3	071N0185	2	➡	BFP 21 L3	071N0170[5)]	
BFP 41 L3	071N0188	2	➡	BFP 41 L3	071N0174	
BFP 21 L3	071N0189	2	➡	BFP 21 L3	071N0170[5)]	+ coil: 071N0062
BFP 31 L3	071N0190	2	➡	BFP 11 L3	071N0141[3) 7)]	
BFP 31 L3	071N0191	2	➡	BFP 11 R3	071N0155[3) 7)]	
BFP 31 L3	071N0192	1	➡	BFP 11 L3	071N0141[3)]	
BFP 21 L3	071N0193	1	➡	BFP 21 L3	071N0156	
BFP 21 L5	071N0194	1	➡	BFP 21 L5	071N0172	
BFP 21 R5	071N0195	1	➡	BFP 21 R5	071N0173	
BFP 41 R3	071N0196	1	➡	BFP 21 R3	071N0157	
BFP 21 L3	071N0197	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 R3	071N0198	1	➡	BFP 21 R3	071N0157	
BFP 20 R3	071N0200	2	➡		No repl.	
BFP 21 L5	071N0202	2	➡	BFP 21 L5	071N0172	
BFP 21 L3	071N0204	2	➡	BFP 21 L3	071N0170[5)]	
BFP 21 R5	071N0207	2	➡	BFP 21 R5	071N0173	
BFP 21 R3	071N0208	2	➡	BFP 21 R3	071N0171[5)]	
BFP 11 L3	071N0210[3)]	1	➡	BFP 11 L3	071N0141[3)]	
BFP 20 L3	071N0212	2	➡	BFP 20 L3	071N0168	+ coupling with single flat (D-shaped)
BFP 11 L3	071N0213[3)]	1	➡	BFP 11 L3	071N0141[3)]	
BFP 21 R3	071N0214	1	➡	BFP 21 R3	071N0171[5)]	
BFP 21 R3	071N0215	2	➡	BFP 21 R3	071N0171[5)]	071N0215 has G 1/8 in S+R
BFP 21 L3	071N0217	2	➡	BFP 21 L3	071N0170[5)]	
BFP 41K R3	071N0220	1	➡		No repl.	
BFP 41K R3	071N0221	1	➡		No repl.	
BFP 41K R5	071N0222	1	➡		No repl.	

3) A screw for 2-pipe operation is fitted under the cover of these pumps.
Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation (see page 54-55).

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

7) Supplied as a 1- pipe only.

Oil pumps – Danfoss BFP

BFP			➡	Danfoss service pumps		
Type	Code no.	1-2 pipe	➡	Type	Code no.	Comments/accessories
BFP 41K R5	071N0223	1	➡		No repl.	
BFP 41 L3	071N0225	2	➡	BFP 41 L3	071N0174	
BFP 21 L3	071N0228	2	➡	BFP 21 L3	071N0170	
BFP 20 R3	071N0229	2	➡	BFP 20 R3	071N0169	
BFP 21 R3	071N0231	1	➡	BFP 21 R3	071N0157	
BFP 41 R3	071N0235	2	➡	BFP 41 R3	071N0137	
BFPC 21 L5	071N0237	2	➡	BFP 21 L5	071N0172	
BFPC 21 L3	071N0238	2	➡	BFP 21 L3	071N0170	
BFPC 21 L3	071N0240	1	➡	BFP 21 L3	071N0156	
BFPC 21 L3	071N0241	1	➡	BFP 21 L3	071N0156	+ 24 V a.c. coil 071N0062
BFPC 21 L3	071N0242	2	➡	BFP 21 L3	071N0170	
BFPC 21 L3	071N0243	2	➡	BFP 21 L3	071N0170	+ 24 V a.c. coil 071N0062
BFPC 21 R3	071N0245	2	➡	BFP 21 R3	071N0171	
BFPC 21 R5	071N0248	2	➡	BFP 21 R5	071N0173	
BFP 20 L3	071N0267	2	➡	BFP 20 L3	071N0168	
BFP 11 L6	071N0270[3)]	2	➡	BFP 11 L6	071N0270[3)]	
BFP 11 R6	071N0271[3)]	2	➡	BRP 11 R6	071N0271[3)]	
BFP 10 L6	071N0272[3)]	2	➡	BRP 10 L6	071N0272[3)]	
BFP 10 R6	071N0273[3)]	2	➡	BRP 10 R6	071N0273[3)]	
BFP 11 L6	071N0274[3)]	1	➡	BRP 11 L6	071N0274[3)]	
BFP 11 R6	071N0275[3)]	1	➡	BRP 11 R6	071N0275[3)]	
BFPC 21 R3	071N0279	1	➡	BFPC 21 R3	071N0157[7)]	+ 24 V a.c. coil 071N0062
BFPC 21 R3	071N0280	2	➡	BFPC 21 R3	071N0156[7)]	071N0280/0156 are suitable for Kerosene
BFPC 21 R5	071N0281	2	➡	BFPC 21 R5	071N0173	071N0281 are suitable for Kerosene
BFPC 21 L3	071N0282	1	➡	BFPC 21 L3	071N0156[7)]	Old coil might be usable
BFPC 21 R3	071N0283	1	➡	BFPC 21 R3	071N0157[7)]	

3) A screw for 2-pipe operation is fitted under the cover of these pumps.
Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation (see page 54-55).
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

Oil pumps – BFP

BFP			➡	Danfoss service pumps		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
BFPC 21 L3	071N0284	2	➡	BFP 21 L3	071N0170	Old coil might be usable
BFPC 21 R3	071N0285	2	➡	BFC 21 R3	071N0171	+ 24 V a.c. coil 071N0062
BFPC 21 R3	071N0286	2	➡	BFP 21 R3	071N0157[7)]	+ 24 V a.c. coil 071N0062 071N0286 and 071N0157 are suitable for Kerosene
BFPC 21 R3	071N0287	2	➡	BFP 21 R3	071N0171	+ 24 V a.c. coil 071N0062
BFP 10 R3	071N0288	1	➡	BFP 20 R3	071N0169	071N0288 are suitable for Kerosene
BFPC 21 L3	071N0289	1	➡	BFP 21L3	071N0156[7)]	Old coil might be usable
BFP 41K L5	071N0290	1	➡		No repl.	
BFP 21 L3	071N0295	2	➡		No repl.	
BFP 20 R3	071N0298	1	➡	BFP20R3	071N0169	
BFP 31 L3	071N1201	2	➡		No repl.	
BFP21 L3-LE	071N2103	2	➡	BFP 21 L3-LE	071N2113	
BFP21 L3-LE	071N2104	2	➡	BFP 21 L3-LE	071N2113	
BFP21 R3-LE	071N2107	2	➡	BFP 21 R3-LE	071N2107	
BFP31 L3-LE	071N2109	2	➡	BFP 21 L3-LE	071N2113	
BFP21 L3-LE	071N2110	2	➡	BFP 21 L3-LE	071N2118	
BFP21 L3-LE	071N2113	2	➡	BFP 21 L3-LE	071N2113	
BFP21 L3-LE	071N2114	2	➡	BFP 21 L3-LE	071N2113	
BFP21 L3-LE-S	071N2116	2	➡	BFP 21 L3-LE	071N2118	
BFP 52E L3	071N2201	2	➡	BFP 52E-L3	071N2201	
BFP 52E L5	071N2202	2	➡	BFP 52E-L5	071N2202	
BFP 52E R3	071N2203	2	➡	BFP 52E R3	071N2203	
BFP 52E R5	071N2204	2	➡	BFP 52E R5	071N2204	
BFP 52E L5	071N2205	2	➡	BFP 52E L5	071N2202	
BFP 52E R5	071N2206	2	➡	BFP 52E R5	071N2204	
BFP 52E L3	071N2211	2	➡	BFP 52E L3	071N2201	+ coupling with single flat (D-shaped)

7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

Oil pumps – Danfoss BFP

BFP			➡	Danfoss service pumps		
Type	Code no.	1-2 pipe	➡	Type	Code no.	Comments/accessories
BFP 52E L5	071N2212	2	➡	BFP 52E L5	071N2202	+ coupling with single flat (D-shaped)
BFP 52E L3	071N2213	2	➡	BFP 52E L3	071N2201	
BFP 21LC	071N2151	2	➡		No. repl.	
BFP 52LC	071N2152	2	➡		No. repl.	
BFP 52K R5	071N2207	2	➡		No. repl.	
BFP 52E L5	071N2217	1	➡	BFP 52E L5	071N2202	
BFP 52E L3	071N2264	2	➡	BFP 52E L3	071N2201	
BFP 52E L5	071N2265	2	➡	BFP 52E L5	071N2202	
BFP 11 L13	071N6101	2	➡	BFP 11 L13	071N6101	
BFP 11 R13	071N6102	2	➡	BFP 11 R13	071N6102	
BFP 10 L13	071N6103	2	➡	BFP 10 L13	071N6103	
BFP 10 R13	071N6104	2	➡	BFP 10 R13	071N6104	
BFP 11 L11	071N6105	2	➡	BFP 11 L11	071N6105	
BFP 11 R11	071N6106	2	➡	BFP 11 R11	071N6106	
BFP 10 L11	071N6107	2	➡	BFP 10 L11	071N6107	
BFP 10 R11	071N6108	2	➡	BFP 10 R11	071N6108	
BFP 11 L8	071N6109	2	➡	BFP 11 L8	071N6109	
BFP 11 R8	071N6110	2	➡	BFP 11 R8	071N6110	
BFP 10 L8	071N6111	2	➡	BFP 10 L8	071N6111	
BFP 10 R8	071N6112	2	➡	BFP 10 R8	071N6112	
BFP 12 L8	071N6201	2	➡	BFP 12 L8	071N6201	
BFP 12 L11	071N6202	2	➡	BFP 12 L11	071N6202	
BFP 12 L13	071N6203	2	➡	BFP 12 L13	071N6203	
BFP 51 L6	071N6204	2	➡	BFP 51 L6	071N6204	
BFP 51 L11	071N6205	2	➡	BFP 51 L11	071N6205	
BFP 52 L6	071N6206	2	➡	BFP 52 L6	071N6206	

Oil pumps – BFP

BFP			➡	Danfoss Service pumps		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
BFP 52 L8	071N6207	2	➡	BFP 52 L8	071N6207	
BFP 52 R8	071N6208	2	➡	BFP 52 R8	071N6208	
BFP 52 L11	071N6209	2	➡	BFP 52 L11	071N6209	
BFP 52 R11	071N6210	2	➡	BFP 52 R11	071N6210	
BFP 52 L13	071N6211	2	➡	BFP 52 L13	071N6211	
BFP 52 R13	071N6212	2	➡	BFP 52 R 13	071N6212	
BFP 53 L6	071N6213	2	➡	BFP 53 L6	071N6213	
BFP 12 R11	071N6214	2	➡	BFP 12 R11	071N6214	
BFP 53 L11	071N6216	2	➡	BFP 53 L11	071N6216	
BFP 12 L6	071N6217	2	➡	BFP 12 L6	071N6217	
BFP 12 R6	071N6218	2	➡	BFP 12 R6	071N6218	
BFP 12 R8	071N6219	2	➡	BFP 12 R8	071N6219	
BFP 12 R13	071N6220	2	➡	BFP 12 R13	071N6220	
BFP 51 R6	071N6221	2	➡	BFP 51 R6	071N6221	
BFP 51 L8	071N6222	2	➡	BFP 51 L8	071N6222	
BFP 51 R8	071N6223	2	➡	BFP 51 R8	071N6223	
BFP 51 R11	071N6224	2	➡	BFP 51 R11	071N6224	
BFP 51 L13	071N6225	2	➡	BFP 51 L13	071N6225	
BFP 51 R13	071N6226	2	➡	BFP 51 R13	071N6226	
BFP 52 R6	071N6227	2	➡	BFP 52 R6	071N6227	
BFP 53 R6	071N6228	2	➡	BFP 53 R6	071N6228	
BFP 53 L8	071N6229	2	➡	BFP 53 L8	071N6229	
BFP 53 R8	071N6230	2	➡	BFP 53 R8	071N6230	
BFP 53 R11	071N6231	2	➡	BFP 53 R11	071N6231	
BFP 53 L13	071N6232	2	➡	BFP 53 L13	071N6232	
BFP 53 R13	071N6233	2	➡	BFP 53 R13	071N6233	

Oil pumps – Suntec

Suntec			➡	Danfoss oil pumps		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
AN47A	13261 P	2	➡		BFP 20 R3	071N0169
AN47D	13391 P	2	➡	BFP 20 L3	071N0168	
AN47C	13421 P	2	➡	BFP 20 L3	071N0168	
AN47B	13951 P	2	➡	BFP 20 R3	071N0169	
AN47A	72163 P	2	➡	BFP 20 R3	071N0169	+ flange and bush Ø54: 071N0047
AN47B	72173 P	2	➡	BFP 20 R3	071N0169	
AN47C	72183 P	2	➡	BFP 20 L3	071N0168	
AN47D	72193 P	2	➡	BFP 20 L3	071N0168	
AN47A	72263 P	2	➡	BFP 20 R3	071N0169	+ bush Ø54: 071B0011
AN47B	72273 P	2	➡	BFP 20 R3	071N0169	
AN47C	72283 P	2	➡	BFP 20 L3	071N0168	
AN47D	72293 P	2	➡	BFP 20 L3	071N0168	
AN47C	72473 M	1	➡	BFP 20 L3	071N0168	+ flange and bush Ø54: 071N0047, possible changeover to 1-pipe operation
AN47A	72832 M	1	➡	BFP 20 R3	071N0169	
AN47A	73263 P	2	➡	BFP 20 R3	071N0169	
AN47B	73273 P	2	➡	BFP 20 R3	071N0169	
AN47C	73283 P	2	➡	BFP 20 L3	071N0168	
AN47A	73443 P	2	➡	BFP 20 R3	071N0169	
AN57B	13301 P	2	➡	BFP 20 R5	071N0129	
AN57A	72433 P	2	➡	BFP 20 R5	071N0129	+ flange and bush Ø54: 071N0047
AN57C	72823 P	2	➡	BFP 20 L5	071N0126	
AN57C	7882 3E6	2	➡	BFP 10 L6	071N0276	
AN67B	13351 P	2	➡	BFP 20 R5	071N0129	Suntec: 80 l/h, BFP: 40 l/h at 10 bar
AN67C	13361 P	2	➡	BFP 10 L8	071N6111	
AN67D	13571 P	2	➡	BFP 20 L5	071N0126	Suntec: 80 l/h, BFP: 40 l/h at 10 bar
AN67C	13381 P	2	➡	BFP 10 L8	071N6111	

Oil pumps – Suntec

Suntec			➡	Danfoss oil pumps		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
AN67C	84102 E1	2	➡	BFP 10 L8	071N6111	+ flange and bush ∅54: 071N0047
AN67C	72333 P	2	➡	BFP 10 L8	070L6111	
AN67A	72383 P	2	➡	BFP 10 R8	071N6112[3)]	
AN67C	72423 P	2	➡	BFP 10 L8	070N6111[3)]	
AN67B	72513 P	2	➡	RSA 40	070-3249	+ flange: 070-0211
AN67D	72523 P	2	➡	BFP 20 L5	071N0126	+ flange and bush ∅54: 071N0047 Suntec: 80 l/h, BFP: 40 l/h at 12 bar
AN67B	73353 P	2	➡	BFP 20 R5	071N0129	Suntec: 80 l/h, BFP: 40 l/h at 12 bar
AN67A	73453 P	2	➡	BFP 10 R8	071N6112[3)]	
AN77C	72752 P	2	➡	BFP 11 L11	071N6105[3)]	+ flange and bush ∅54: 071N0047
AN97C	94212E1	2	➡	BFP 10 L11	071N6107[3)]	
AN77A	72752L1		➡	BFP 10 R11	071N6108[3)]	
AN97A	94122E1		➡	BFP 10 R13	071N6104[3)]	
AL35B	95202 P0200	2	➡	BFP 21 R3	071N0171[5)]	+ 24 V a.c. coil: 071N0062
AL35B	95202 P0500	2	➡	BFP 21 R3	071N0171[5)]	
AL35C	95212 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AL35C	95242 M0500	1	➡	BFP 21 L3	071N0156	
AL35A	95262 P0500	2	➡	BFP 21 R3	071N0171[5)]	
AL35C	95282 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AL35D	95292 P0200	2	➡	BFP 21 L3	071N0170[5)]	+ 24 V a.c. coil: 071N0062
AL35C	95402 P0500	2	➡	BFP 21 L3	071N0170[5)]	Suntec: G 1/8 in S+R
AL35C	95652 M0500	1	➡	BFP 21 L3	071N0156	
AL35A	95702 P0500	2	➡	BFP 21 R3	071N0171[5)]	
AL35C	95782 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AL35B	95802 P0500	2	➡	BFP 21 R3	071N0171[5)]	
AL35C	95402 P0500R	2	➡	BFP 21 L3	071N0170[5)]	

3) A screw for 2-pipe operation is fitted under the cover of these pumps.
Without horseshoe washer: Pump set for 2-pipe operation.
With horseshoe washer: Pump set for 1-pipe operation (see page 54-55).
5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Suntec

Suntec				Danfoss Oil pumps		
Type	Code no.	1-2 pipe		Type	Code no.	Comments/accessories
AL55B	95312 P0500	2	➡	BFP 21 R5	071N0173	
AL65C	-	2	➡	BFP 11 L8	071N6109	+ flange and bush Ø54: 071N0047
AL95C	-	2	➡	BFP 11 L13	071N6101	
ALE 35C	93242 P0500	2	➡	BFP 21 L3-LE	071N2119	
AS47A	15361 P0500	2	➡	BFP 21 R3	071N0171[5)]	
AS47B	15371 P0500	2	➡	BFP 21 R3	071N0171[5)]	
AS47C	15381 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47D	15391 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47D	15501 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47B	15511 P0500	2	➡	BFP 21 R3	071N0171[5)]	
AS47C	15541 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47D	15571 P0500	2	➡	BFP 21 L3	071N0170[5)]	+ coupling with single flat (D-shaped)
AS47D	15621 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47D	15681 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47C	15691 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47D	15721 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47D	15801 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47A	74323 P0500	2	➡	BFP 21 R3	071N0171[5)]	+ flange and bush Ø54: 071N0047
AS47C	74343 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47D	74353 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47A	74363 P0500	2	➡	BFP 21 R3	071N0171[5)]	+ bush Ø54: 071B0011
AS47C	74383 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47D	74393 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47C	74443 P0500	2	➡	BFP 21 L3	071N0170[5)]	+ flange and bush Ø54: 071N0047
AS47B	74453 P0500	2	➡	BFP 21 R3	071N0171[5)]	
AS47C	74513 M0500	1	➡	BFP 21 L3	071N0156	

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Suntec

Suntec			➡	Danfoss oil pumps		
Type	**Code no.**	**1-2 pipe**	➡	**Type**	**Code no.**	**Comments/accessories**
AS47C	74613 P0500	2	➡	BFP 21 L3	071N0170[5)]	+ flange and bush Ø54: 071N0047
AS47C	75543 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47D	75623 P0500	2	➡	BFP 21 L3	071N0170[5)]	
AS47A	75643 P0500	2	➡	BFP 21 R3	071N0171[5)]	
AS57C	15441 P0500	2	➡	BFP 21 L5	071N0172	
AS57C	74413 P0500	2	➡	BFP 21 L5	071N0172	+ flange and bush Ø54: 071N0047
AS57B	74423 P0500	2	➡	BFP 21 R5	071N0173	
AS57C	75443 P0500	2	➡	BFP 21 L5	071N0172	
AS67C	-		➡	BFP 11 L8	071N6109	
AE47C	13601 P	2	➡	BFP 20 L5	071N0126	
AE47C	13701 M	1	➡	BFP 20 L5	071N0126	Possible changeover to 1-pipe operation Suntec: 1/8 NPTF in nozzle outlet
AE47B	13661 P	2	➡	BFP 20 R5	071N0129	
AE47D	13781 M	1	➡	BFP 20 L5	071N0126	Possible changeover to 1-pipe operation
AE47A	13841 M	1	➡	BFP 20 R5	071N0129	
AE47D	13851 P	2	➡	BFP 20 L5	071N0126	
AE47C	13861 P	2	➡	BFP 20 L5	071N0126	
AE47C	13871 P	2	➡	BFP 20 L5	071N0126	
AE47B	72673 P	2	➡	BFP 20 R5	071N0129	+ flange and bush Ø54: 071N0047
AE47C	72743 M	1	➡	BFP 20 L5	071N0126	+ flange and bush Ø54: 071N0047, Possible changeover to 1-pipe operation
AE47C	73683 P	2	➡	BFP 20 L5	071N0126	
AE57B	13641 M	1	➡	BFP 20 R5	071N0129	Possible changeover to 1-pipe operation
AE57C	73733 P	2	➡	BFP 20 L5	071N0126	
AE67D	72783 P	2	➡	BFP 20 L5	071N0126	+ flange and bush Ø54: 071N0047 Suntec: 80 l/h, BFP: 40 l/h at 12 bar

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Suntec

Suntec				Danfoss oil pumps		
Type	Code no.	1-2 pipe		Type	Code no.	Comments/accessories
AE67C	73613 P	2	➡	BFP 10 L6	071N0272	
AE77C	72702 P	2	➡	BFP 10 L8	071N6111	+ flange and bush Ø54: 071N0047
AE77C	73802 P	2	➡	BFP 10 L8	071N6111	
AE97C	73902 P	2	➡	BFP 10 L11	071N6107	
AP47A	75553 P0500	2	➡		No repl.	Suntec: nozzle outlet to the right
AP47C	75563 P0500	2	➡	BFP 51 L6	071N6204	
AP47B	75613 P0500	2	➡	BFP 51 R6	071N6221	
AP47C	74603 P0500	2	➡	BFP 51 L6	071N6204	+ flange and bush Ø54: 071N0047
AP57C	74433 P0500	2	➡	BFP 51 L6	071N6204	
AP57C	75453 P0500	2	➡	BFP 51 L6	071N6204	
AP57A	75493 P0500	2	➡		No repl.	Suntec: nozzle outlet to the right
AP67C	74583 P0500	2	➡	BFP 51 L6	071N6204	+ flange and bush Ø54: 071N0047
AP67C	75593 P0500	2	➡	BFP 51 L6	071N6204	
AP245C	95541 P0500	2	➡	BFP 51 L6	071N6204	
AP245C	95601 P0500	2	➡	BFP 51 L6	071N6204	
AP255C	-	2	➡	BFP 51 L6	071N6204	+ flange and bush Ø54: 071N0047
AP275C	-	2	➡	BFP 51 L8	071N6222	
AP265C	95111 P0500	2	➡	BFP 51 L8	071N6222	
AP295C	-	2	➡	BFP 51 L11	071N6205	+ flange and bush Ø54: 071N0047
AP345C	95101 P0500	2	➡	BFP 53 L6	071N6213[4)]	
AT245C	95412 P0500	2	➡	BFP 52E L5	071N2202	
AT245D	95442 P0500	2	➡		No repl.	Suntec: Nozzle outlet to the right
AT245A	95472 P0500	2	➡		No repl.	
AT245D	95482 M0500	1	➡		No repl.	
AT255C	95492 P0500	2	➡	BFP 52 L6	071N6206	
AT255A	95522 P0500	2	➡		No repl.	Suntec: Nozzle outlet to the right

4) The pump NC valve must be connected in parallel to the NC valve in nozzle line.

Oil pumps – Suntec

Suntec			➨	Danfoss oil pumps		
Type	**Code no.**	**1-2 pipe**	➨	**Type**	**Code no.**	**Comments/accessories**
AT265C	95562 P0500	2	➨	BFP 52 L8	071N6207	
AT275C	95832 P0500	2	➨	BFP 52 L11	071N6209	
AT355D	95642 P0500	2	➨		No repl.	Suntec: Nozzle outlet to the right
AT345C	955582 P0560	2	➨	BFP 53 L6	071N6213	
AT355C	9550	2	➨	BFP 53 L6	071N6213	
A2L95D	9702 2P 0500	2	➨	BFP 12 L13	071N6203	

Oil pumps – Eckerle

Eckerle		➨	Danfoss oil pumps		
Old designation	New designation	➨	Type	Code no.	Comments/accessories
UNI 1.1 L5 L64W	UNI-E 2.1 L1 L64	➨	BFP 20 L3	071N0168	Eckerle: G 1/8 in S+R
UNI 1.2 L1 L64-50	UNI 2.12 L1 L64	➨	BFP 21 L3	071N0170[5)]	
UNI 1.2 L5 L14	UNI 2.12 L1 L14	➨	BFP 21 L3	071N0170[5)]	
UNI 1.2 L5 L64-M1	UNI-E 2.1 L1 L64-21	➨	BFP 21 L3	071N0170[5)]	Eckerle: G 1/8 in S+R
UNI 1.2 L5 L64-50	UNI 2.12 L1 L64	➨	BFP 21 L3	071N0170[5)]	
UNI 1.2 L5 M14-50	UNI 2.12 L1 M14	➨	BFP 21 L3	071N0170[5)]	
UNI 1.2 L5 M64-50-W	UNI 2.12 L1 M64-65	➨	BFP 21 L3	071N0170[5)]	Eckerle: G 1/8 in S+R
UNI 1.2 L62 M14-01-W	UNI 2.12 L6 M14-65	➨	BFP 11 L8	071N6109	
UNI 1.2 L62 L14W		➨	BFP 21 L5	071N0172	Eckerle: max. 75 l/h, BFP: max 40 l/h at 12 bar
UNI 1.42 L5 A64-W	UNI 2.42 L5 L64-65	➨	BFP 52E L5	071N2202	Eckerle: G 1/8 in S+R
UNI 1.42 L5 L64W		➨	BFP 52E L5	071N2202	
UNI 1.42 L6 L64W		➨	BFP 52 L8	071N6207	
UNI 1.72 L62 L14-W	UNI 2.17 L6 M14-65	➨	BFP 10 L8	071N6111	
UNI 2.1 L1 L40	UNI-E 2.1 L1 L10 (-22,-30)	➨	BFP 20 L3	071N0168	+ coupling with single flat (D-shaped)
UNI 2.1 L1 L44	UNI-E 2.1 L1 L14	➨	BFP 20 L3	071N0168	
UNI 2.1 L1 L44H	UNI-E 2.1 L14	➨	BFP 20 L3	071N0168	
UNI 2.1 R1 L40	UNI-E 2.1 R1 L10	➨	BFP 20 R3	071N0169	+ coupling with single flat (D-shaped)
UNI 2.1 R1 L44-21	UNI-E 2.1 R1 L14	➨	BFP 20 R3	071N0169	
UNI 2.1 L5 L40-21	UNI-E 2.1 L5 L10	➨	BFP 20 L5	071N0126	+ coupling with single flat (D-shaped)
UNI 2.1 L5 L42	UNI-E 2.1 L5 L12	➨	BFP 20 L5	071N0126	+ coupling with single flat + 071B0011
UNI 2.1 L5 L44	UNI-E 2.1 L5 L14 (-13)	➨	BFP 20 L5	071N0126	
UNI 2.1 L5 L50	UNI-E 2.1 L5 L10	➨	BFP 20 L5	071N0126	Eckerle: 10-25 bar, BFP max. 20 bar + coupling with single flat (D-shaped)
UNI 2.1 L5 R44	UNI-E 2.1 L5 R14 (-13)	➨	BFP 20 L5	071N0126	
UNI 2.1 L5 R94	UNI-E 2.1 L5 R74	➨	BFP 20 L5	071N0126	Eckerle: G 1/8 in S+R

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Eckerle

Eckerle		➨	Danfoss Oil pumps		
Old designation	New designation	➨	Type	Code no.	Comments/accessories
UNI 2.1 R5 L42-UI-21	UNI-E 2.1 R5 L12-80	➨	BFP 20 R5	071N0129	+ coupling with single flat (D-shaped)
UNI 2.1 R5 L43-UI-21	UNI-E 2.1 R5 L13-80	➨	BFP 20 R5	071N0129	+ flange: 071N0047
UNI 2.1 R5 L43		➨	BFP 20 R5	071N0129	
UNI 2.1 R5 L44	UNI-E 2.1 R5 L14	➨	BFP 20 R5	071N0129	
UNI 2.1 R5 L54	UNI-E 2.1 R5 L24	➨	BFP 20 R5	071N0129	Eckerle: max 25 bar
UNI 2.1 R5 R42		➨	BFP 20 R5	071N0129	
UNI 2.1 R5 R44	UNI-E 2.1 R5 R14	➨	BFP 20 R5	071N0129	
UNI 2.1 R5 R45-21	UNI-E 2.1 R5 R15	➨	BFP 20 R5	071N0129	+ bush: 071B0011
	UNI-E 2.1 R5 R60	➨	BFP 20 R5	071N0129	G 1/8 in S+R + coupling with single flat
UNI 2.1 R5 R80	UNI-E 2.1 R5 R40	➨	BFP 20 R5	071N0129	+ coupling with single flat (D-shaped)
UNI 2.1 L6 L54	UNI-E 2.1 L6 L24	➨	BFP 10 L8	071N6111	
UNI 2.1 L6 L54-06	UNI-E 2.1 L6 L24	➨	BFP 10 L8	071N6111	
UNI 2.1 R6 L25	UNI-E 2.1 R6 L25	➨	RSA 40	070-3249	
UNI 2.1 R6 R54	UNI-E 2.1 R6 L24	➨	BFP 20 R5	071N0129	Eckerle: 75 l/h, BFP: 40 l/h at 10 bar
UNI 2.1 L7 L55	UNI-E 2.1 L7 L15	➨	BFP 10 L13	071N6103	+ bush 071B0011
UNI 2.1 L7 L55-05	UNI-E 2.1 L7 L25	➨	BFP 10 L13	071N6103	
UNI 2.1 R7 L55	UNI-E 2.1 R7 L15	➨	BFP 10 R13	071N6104	
UNI 2.1 G22 L1 L10/L40	UNI-E 2.1 G22	➨	BFP 20 L3	071N0168	+ coupling with single flat (D-shaped)
	UNI-E 2.1 L1 L64 (-21)	➨	BFP 20 L3	071N0168	G 1/8 in S+R
	UNI-E 2.1 L5 R74	➨	BFP 20 L5	071N0172	
UNI 2.1 G41-21 L1 L10	UNI-E 2.1 G41	➨	BFP 20 L3	071N0168	+ coupling with single flat (D-shaped)
	UNI-E 2.1 G41-13	➨	BFP 20 L3	071N0168	
	UNI- E 2.2 L1 L10	➨	BFP 21 L3	071N0170[5)]	
UNI 2.2 L1 L14	UNI-E 2.2 L1 L14	➨	BFP 21 L3	071N0170[5)]	
UNI 2.2 L1 L16W	UNI-E 2.2 L1 L16-10	➨	BFP 21 L3	071N0170[5)]	+ flange: 071N0047

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Eckerle

Eckerle		➨	Danfoss Oil pumps		
Old designation	New designation	➨	Type	code no.	Comments/accessories
UNI 2.2 L1 L44	UNI-E 2.2 L1 L14	➨	BFP 21 L3	071N0170[5)]	
UNI 2.2 L1 R14	UNI-E 2.2 L1 R14-12	➨	BFP 21 L3	071N0170[5)]	
UNI 2.2 R1 L40	UNI-E 2.2 R1 L10	➨	BFP 21 R3	071N0171[5)]	+ coupling with single flat (D-shaped)
UNI 2.2 R1 M14	UNI-E 2.2 R1 M14	➨	BFP 21 R3	071N0171[5)]	
UNI 2.2 R1 R24	UNI-E 2.2 R1 R24	➨	BFP 21 R3	071N0171[5)]	Eckerle: max 25 bar
	UNI-E 2.2 R1 S14	➨	BFP 21 R3	071N0171[5)]	
UNI 2.2 L5 L14	UNI-E 2.2 L5 L14-92	➨	BFP 21 L5	071N0172	Eckerle: G 1/8 in S+R Eckerle: 10-25 bar, BFP: max. 20 bar
UNI 2.2 L5 L15-21-05	UNI-E 2.2 L5 L15	➨	BFP 21 L5	071N0172	+ bush: 071B0011
UNI 2.2 L5 L40-X	UNI-E 2.2 L5 L10-50	➨	BFP 21 L5	071N0172	+ coupling with single flat (D-shaped)
UNI 2.2 L5 L42	UNI-E 2.2 L5 L12	➨	BFP 21 L5	071N0172	+ bush: 071B0011 + coupling with single flat (D-shaped)
UNI 2.2 L5 L60		➨	BFP 21 L5	071N0172	+ coupling with single flat (D-shaped)
	UNI-E 2.2 L5 L60	➨	BFP 21 L5	071N0172	Eckerle: G 1/8 in S+R + coupling with single flat (D-shaped)
UNI 2.2 L5 L62		➨	BFP 21 L5	071N0172	
UNI 2.2 L5 M14-C1	UNI.E 2.2 L5 M14-12	➨	BFP 21 L5	071N0172	
UNI 2.2 L5 S20	UNI-E 2.2 L5 S20	➨	BFP 21 L5	071N0172	Eckerle: 10-25 bar, BFP: max. 20 bar + coupling with single flat (D-shaped)
UNI 2.2 L5 S20-21-BUD	UNI-E 2.2 L5 S20 BUD	➨	BFP 21 L5	071N0172	Eckerle: max 25 bar, BFP: max. 20 bar + coupling with single flat (D-shaped)
UNI 2.2 L5 S74	UNI-E 2.2 L5 L14	➨	BFP 21 L5	071N0172	Eckerle: 10-25 bar, BFP: max. 20 bar + coupling with single flat (D-shaped)
	UNI-E 2.2 L5 S74	➨	BFP 21 L5	071N0172	G 1/8 in S+R. Eckerle: max 25 bar
UNI 2.2 R5 L14	UNI-E 2.2 R5 L14	➨	BFP 21 R5	071N0173	
	UNI-E 22 R5 M14	➨	BFP 21 R5	071N0173	

Oil pumps – Eckerle

Eckerle		➨	Danfoss Oil pumps		
Old designation	New designation	➨	Type	Code no.	Comments/accessories
UNI 2.2 R5 M45	UNI-E 2.2 R5 M15	➨	BFP 21 R5	071N0173	+ bush: 071B0011
UNI 2.2 R5 R14	UNI-E 2.2 R5 R14	➨	BFP 21 R5	071N0173	
UNI 2.2 R5 R60-21	UNI-E 2.2 R5 R60	➨	BFP 21 R5	071N0173	Eckerle: G 1/8 in S+R
UNI 2.2 R5 R80B	UNI-E 2.2 R5 R60	➨	BFP 21 R5	071N0173	+ coupling with single flat (D-shaped)
	UNI-E 2.2 R5 S14	➨	BFP 21 R5	071N0173	
UNI 2.2 R5 S60	UNI-E 2.2 R5 S60	➨	BFP 21 R5	071N0173	
	UNI-E 2.2 L6 L14	➨	BFP 11 L8	071N6109	
UNI 2.2 L6 L16W	UNI-E 2.2 L6 L16-10	➨	BFP 11 L8	071N6109	+ flange and bush ∅54: 071N0047
UNI 2.2 L6 L24	UNI-E 2.2 L6 L24	➨	BFP 11 L8	071N6109	
	UNI-E 2.2 L6 LR14-81	➨	BFP 21 L5	071N0172	Eckerle: 75 l/h, BFP: 40 l/h at 12 bar
UNI 2.2 R6 M24	UNI-E 2.2 R6 M24	➨	BFP 21 R5	071N0173	
UNI 2.2 R6 S24-ET	UNI-E 2.2 R6 S24 (-40)	➨	BFP 11 R8	071N6110	
UNI 2.2 R6 S24 ET(R1)	UNI-E 2.2 R6 S24-40	➨	BFP 11 R8	071N6110	
UNI 2.2 L7 L26		➨	BFP 11 L11	071N6105	+ flange and bush ∅54: 071N0047
UNI 2.2 L7 L24		➨	BFP 11 L11	071N6105	
	UNI-E 2.2 L7 L28	➨	BFP 11 L11	071N6105	
	UNI-E 2.2 L7 LR14-61	➨	BFP 11 R11	071N6106	BFP only nozzle outlet to the right
UNI 2.2 R7 L24-05	UNI-E 2.2 R7 L24	➨		No repl.	Eckerle: nozzle outlet to the left
UNI 2.2 R7 R 24-R1(-ET)	UNI-E 2.2 R7 R24-40	➨	BFP 11 R11	071N6106	
UNI 2.2 R7 R54-5 (-ET)	UNI-E 2.2 R7 R24	➨	BFP 11 R11	071N6106	
UNI 2.2 R7 R56-H-ET	UNI-E 2.2 R7 R24	➨	BFP 11 R11	071N6106	
UNI 2.3 L1 L56 (W-1-05)	UNI-E 2.3 L1 L26-80	➨	BFP 20 L3	071N0168	Eckerle: 10-25 bar BFP: max. 20 bar + flange and bush ∅54: 071N0047
UNI 2.3 L1 R54	UNI-E 2.3 L1 R24-13	➨	BFP 20 L3	071N0168	Eckerle: 10-25 bar, BFP: max 20 bar
UNI 2.3 L5 L54	UNI-E 2.3 L5 L24-13	➨	BFP 20 L5	071N0126	

Oil pumps – Eckerle

Eckerle		➨	Danfoss oil pumps		
Old designation	New designation	➨	Type	Code no.	Comments/accessories
UNI 2.3 L5 L56-I (W-06)	UNI-E 2.3 L5 L26-80	➨	BFP 20 L5	071N0126	Eckerle: 10-25 bar, BFP: max 20 bar + flange and bush ∅54: 071N0047
	UNI-E 2.3 L5 L64	➨	BFP 20 L5	071N0126	Eckerle: G 1/8 in S+R
UNI 2.3 L5 R54-S	UNI-E 2.3 L5 R24-13	➨	BFP 20 L5	071N0126	Eckerle: max 25 bar, BFP: max 20 bar
UNI 2.3 R5 L54-05	UNI-E 2.3 R5 L24	➨	BFP 20 R5	071N0129	
	UNI-E 2.3 R5 R24-13	➨	BFP 20 R5	071N0129	
UNI 2.3 R5 R54		➨	BFP 20 R5	071N0129	Eckerle: 10-25 bar, BFP: max 20 bar
UNI 2.3 R5 R64-I	UNI-E 2.3 R5 R24-93	➨	BFP 20 R5	071N0129	Eckerle: max 25 bar, BFP: max 20 bar
UNI 2.3 R6 L55-05	UNI-E 2.3 R6 L25	➨	BFP 10 R8	071N6112	+ bush 071B0011
UNI 2.4 L1 M10-VO	UNI-E 2.4 L1 M10-22	➨	BFP 52E L3	071N2201[4)]	+ coupling with single flat (D-shaped)
UNI 2.4 L1 M14-C1	UNI-E 2.4 L1 M14-12	➨	BFP 52E L3	071N2201[4)]	
UNI 2.4 L1 R14-C		➨		No repl.	Righthand nozzle outlet on Eckerle
UNI 2.4 L1 R14-V1-21	UNI-E 2.4 L1 R14-12	➨		No repl.	
UNI 2.4 L1 R44	UNI-E 2.4 L1 R14	➨		No repl.	
	UNI-E 2.4 L5 L20	➨	BFP 52E L5	071N2202[4)]	+ coupling with single flat (D-shaped
UNI 2.4 L5 L24	UNI-E 2.4 L5 L24	➨	BFP 52E L5	071N2202[4)]	
	UNI-E 2.4 L5 M20	➨	BFP 52E L5	071N2202[4)]	+ coupling with single flat (D-shaped)
UNI 2.4 L5 M24		➨	BFP 52E L5	071N2202[4)]	
UNI 2.4 L5 M20-21	UNI-E 2.4 L5 M20	➨	BFP 52E L5	071N2202[4)]	+ coupling with single flat (D-shaped)
UNI 2.4 L5 R24		➨		No repl.	Righthand nozzle outlet on Eckerle
UNI 2.4 L5 R24		➨		No repl.	
UNI 2.4 L5 S24	UNI-E 2.4 L5 S24	➨		No repl.	
UNI 2.4 R5 L24		➨	BFP 52E R5	071N2204[4)]	
UNI 2.4 R5 L24-05	UNI-E 2.4 R5 L24	➨	BFP 52E R5	071N2204[4)]	

4) The pump NC valve must be connected in parallel to the NC valve in nozzle line.

Oil pumps – Eckerle

Eckerle		➨	Danfoss oil pumps		
Old designation	New designation	➨	Type	Code no.	Comments/accessories
UNI 2.4 R5 R24	UNI-E 2.4 R5 R24	➨		No repl.	Righthand nozzle output on Eckerle
UNI 2.4 R5 S70		➨		No repl.	
UNI 2.4 R5 S70-ET	UNI-E 2.4 R5 S70	➨		No repl.	
UNI 2.4 R5 5 L24	UNI-E 2.4 R5.5 L24	➨	BFP 51 R6	071N6221	
UNI 2.4 L6 L22	UNI-E 2.4 L6 L22	➨	BFP 51 L8	071N6222	+ coupling with single flat (D-shaped) + bush: 071B0011
UNI 2.4 L6 L24		➨	BFP 51 L8	071N6222	
UNI 2.4 L6 L24-05	UNI-E 2.4 L6 L24	➨	BFP 51 L8	071N6222	
UNI 2.4 L6 M24-C1	UNI-E 2.4 L6 M24-12	➨	BFP 51 L8	071N6222	
UNI 2.4 R6 S24		➨		No repl.	Righthand nozzle outlet on Eckerle
UNI 2.4 R6 S24 ET	UNI-E 2.4 R6 S24	➨		No repl.	
UNI 2.4 L7 L23	UNI-E 2.4 L7 L22	➨	BFP 51 L11	071N6205	+ bush: 071B0011 + coupling with single flat D-shaped)
UNI 2.4 L7 L24		➨	BFP 51 L11	071N6205	
UNI 2.4 L7 L24-05	UNI-E 2.4 L7 L24	➨	BFP 51 L11	071N6205	
UNI 2.4 L7 L25-K	UNI-E 2.4 L7 L25-20	➨	BFP 51 L11	071N6205	+ bush Ø54: 071B0011
UNI 2.4 L7 L26		➨	BFP 51 L11	071N6205	+ flange and bush: 071N0047
UNI 2.4 L7 L58	UNI-E 2.4 L7 L26 (-05)	➨	BFP 51 L11	071N6205	
UNI 2.4 L7 M26	UNI-E 2.4 L7 M25	➨	BFP 51 L11	071N6205	+ bush Ø54: 071B0011
UNI 2.4 R7 R54-06	UNI-E 2.4 R7 R24	➨		No repl.	Righthand nozzle outlet on Eckerle
UNI 2.42 R5 R70-ET	UNI-E 2.42 R5 R70	➨		No repl.	
	UNI-E 2.42 L5 L64-65	➨	BFP 52E L5	071N2202	Eckerle: G 1/8 in S+R
	UNI-E 2.6 L5 L14	➨	BFP 20 L5	071N0126	
UNI 2.6 L5 L44		➨	BFP 20 L5	071N0126	Possible changeover to 1-pipe operation
	UNI-E 2.6 L6 L14	➨	BFP 10 L6	071N0272	
UNI 2.6 L6 L44	UNI-E 2.6 L6 L14	➨	BFP 10 L6	071N0272	

Oil pumps – Eckerle

Eckerle		➨	Danfoss oil pumps		
Old designation	New designation	➨	Type	Code no.	Comments/accessories
UNI 2.6 Stage 6		➨		N0 rep.	
UNI 2.6 Stage 7		➨		No rep.	
UNI 2.7 L5 L44		➨	BFP 10 L6	071N0272	For Kerosene-Eckerle: 40 l/h, BFP: 60 l/h at 10 bar
UNI 2.7 R5 R44	UNI-E 2.7 R5 R14	➨	BFP 10 R6	071N0273	
UNI 2.8 L5 L16		➨	BFP 21 L6	071N0172	BFP without remote setting + flange: 071N0047
UNI 2.91 L5 L44	UNI-E 2.91 L5 L14	➨		No repl.	
UNI 2.91 L7 L44-05	UNI-E 2.91 L7 L14	➨		No repl.	
UNI 2.91 R7 L44	UNI-E 2.91 R7 L14	➨		No repl.	
UNI 2.93 L1 R44	UNI-E 2.93 L1 R14	➨		No repl.	
UNI 2.96 L5 L44-05	UNI-E 2.96 L5 L14	➨		No repl.	
UNI 2.96 L7 L44	UNI-E 2.96 L7 L14	➨		No repl.	
UNI 2.10 L7 L56-S-W	UNI-E 2.10 L7 L26-11	➨	RSA 60	070L3362	
UNI 2.10 L7 L56-W1-05	UNI-E 2.10 L7 L26-11	➨	RSA 60	070L3362	+ flange: 070-0211
UNI 2.10 L8 L56-S-W	UNI-E 2.10 L8 L26-11	➨	RSA 95	070L3482	
UNI 2.10 L8 L56-W1-05	UNI-E 2.10 L8 L26-11	➨	RSA 95	070L3482	+ flange: 070-0211
UNI 2.12 L1 L14		➨	BFP 21 L3	071N0170[5)]	
UNI 2.12 L1 L64		➨	BFP 21 L3	071N0170[5)]	Eckerle: G $^1/_8$ in S+R
UNI 2.12 L1 M14		➨	BFP 21 L3	071N0170[5)]	
UNI 2.12 L1 M64		➨	BFP 21 L3	071N0170[5)]	Eckerle: G $^1/_8$ in S+R
UNI 2.12 L1 M64-65		➨	BFP 21 L3	071N0170[5)]	
UNI 2.12 L6 M14		➨	BFP 11 L8	071N6109	
UNI 2.12 L6 M14-65		➨	BFP 11 L8	071N6109	
UNI 2.13 L8 L56-S	UNI-E 2.13 L8 L26-11	➨		No rep.	
UNI 2.17 L6 M14-65		➨		No rep.	
UNI 2.20 11L7 L26-W-01	UNI-E 2.20 L7 L26	➨		No rep.	Eckerle: $^7/_{16}$" shaft; BFP: no NC-valve

5) If a 1-pipe pump is needed, 071N0156 can be delivered instead of 071N0170 and 071N0157 instead of 071N0171.

Oil pumps – Eckerle

Eckerle		➨	Danfoss oil pumps		
Old designation	New designation	➨	Type	Code no.	Comments/accessories
BPC	BPC-40 1.1 LL 11	➨	BFP 20 L3	071N0168	
BPC	BPC-40 1.1 LL 21	➨	BFP 20 L3	071N0168	Eckerle: G 1/8 in S+R
BPC	BPC-40 1.1 LR 11	➨	BFP 20 L3	071N0168	
BPC	BPC-40 1.1 LR 21	➨	BFP 20 L3	071N0168	Eckerle: G 1/8 in S+R
BPC	BPC-40 1.1 RL 11	➨	BFP 20 R3	071N0169	
BPC	BPC-40 1.1 RL 21	➨	BFP 20 R3	071N0169	Eckerle: G 1/8 in S+R
BPC	BPC-40 1.1 RR 11	➨	BFP 20 R3	071N0169	
BPC	BPC-40 1.1 RR 21	➨	BFP 20 R3	071N0169	Eckerle: G 1/8 in S+R
BPC	BPC-40 1.1 RR 11(+)	➨	BFP 20 R3	071N0169	+ flange and bush ∅54: 071N0047
BPC	BPC-40 2.1 LL 11	➨	BFP 21 L3	071N0170	
BPC	BPC-40 2.1 LL 21	➨	BFP 21 L3	071N0170	Eckerle: G 1/8 in S+R
BPC	BPC-40 2.1 RL 11	➨	BFP 21 R3	071N0171	
BPC	BPC-40 2.1 RR 11	➨	BFP 21 R3	071N0171	
BPC	BPC-40 2.1 RR 21	➨	BFP 21 R3	071N0171	Eckerle: G 1/8 in S+R
BPC	BPC-40 2.1 LL 11(+)	➨	BFP 21 L3	071N0170	+ flange and bush ∅54: 071N0047
BPC	BPC-40 2.1 LR 11	➨	BFP 21 L3	071N0170	
BPC	BPC-40 2.1 LR 21	➨	BFP 21 L3	071N0170	Eckerle: G 1/8 in S+R
BPC	BPC-40 2.1 RL 21	➨	BFP 21 R3	071N0171	Eckerle: G 1/8 in S+R
BPC	BPC-40 2.3 LL 11	➨	BFP 52E L3	071N2201	The pump NC-valve must be connected in parallel to the NC-valve in the nozzleline
BPC	BPC-40 2.3 LR 11	➨		No repl.	Righthand nozzle outlet on Eckerle
BPC	BPC-40 2.3 RL 11	➨	BFP 52E R3	071N2203	The pump NC-valve must be connected in parallel to the NC-valve in the nozzleline
BPC	BPC-40 2.3 RR 21	➨		No rep.	Righthand nozzle outlet on Eckerle

Oil pumps – Delta

Delta			➡	Danfoss oil pumps		
Type	Code no.	1-2 pipe	➡	Type	Code no.	Remarks/accessories
V	V1LR2 4 (or 5)	2	➡	BFP 20 L3	071N0168	
V	V1LR1 4 (or 5)	1	➡	BFP 20 L3	071N0168[2]	
V	V1LL2 4 (or 5)	2	➡	BFP 20 L3	071N0168	
V	V1LL1 4 (or 5)	1	➡	BFP 20 L3	071N0168[2]	
V	V1RL2 4 (or 5)	2	➡	BFP 20 R3	071N0169	
V	V1RL1 4 (or 5)	1	➡	BFP 20 R3	071N0169[2]	
V	V1RR2 4 (or 5)	2	➡	BFP 20 R3	071N0169	
V	V1RR1 4 (or 5)	1	➡	BFP 20 R3	071N0169[2]	
V	V2LR2 4 (or 5)	2	➡	BFP 10 L6	071N0272	
V	V2LR1 4 (or 5)	1	➡	BFP 10 L6	071N0276	
V	V2LL2 4 (or 5)	2	➡	BFP 20 L5	071N0126	Delta: 57 l/h; BFP: 40 l/h at 10 bar
V	V2LL1 4 (or 5)	1	➡	BFP 20 L5	071N0126[2]	
V	V2RL2 4 (or 5)	2	➡	BFP 10 R6	071N0273	
V	V2RL1 4 (or 5)	1	➡	BFP 10 R6	071N0277	
V	V2RR2 4 (or 5)	2	➡	BFP 20 R5	071N0129	Delta: 57 l/h; BFP: 40 l/h at 10 bar
V	V2RR1 4 (or 5)	1	➡	BFP 20 R5	071N0129[2]	
VU	VU3LR 1 4 (or 5)	1	➡	BFP 10 L8	071N6111[3]	
VU	VU3LR 2 4 (or 5)	2	➡	BFP 10 L8	071N6111	
VU	VU3RL 1 4 (or 5)	1	➡	BFP 10 R8	071N6112[2]	
VU	VU3RL 2 4 (or 5)	2	➡	BFP 10 R8	071N6112	
VU	VU4LR 1 4 (or 5)	1	➡	BFP 10 L11	071N6107[2]	
VU	VU4LR 2 4 (or 5)	2	➡	BFP 10 L11	071N6107	
VU	VU4RL 1 4 (or 5)	1	➡	BFP 10 R11	071N6108[2]	
VU	VU4RL 2 4 (or 5))	2	➡	BFP 10 R11	071N6108	
VU	VU5LR 1 4 (or 5)	1	➡	BFP 10 L13	071N6103[2]	
VU	VU5LR 2 4 (or 5)	2	➡	BFP 10 L13	071N6103	

2) Important: These pumps are delivered for 2-pipe operation. If the pumps are mounted on a 1-pipe system, the changeover screw must be removed (fig. page 54-55) and the return port must be stopped with a metal plug. 3) A screw for 2-pipe operation is fitted under the cover of these pumps. Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation.

Oil pumps – Delta

Delta			➨	Danfoss oil pumps		
Type	Code no.	1-2 pipe	➨	Type	Code no.	Remarks/accessories
VU	VU5RL1 4 (or 5)	1	➨	BFP 10 R13	071N6104[3]	
VU	VU5RL2 4 (or 5)	2	➨	BFP 10 R13	071N6104[3]	
VD	VD1LR2 4 (or 5)	2	➨	BFP 20 L3	071N0168	
VD	VD1LR 1 4 (or 5)	1	➨	BFP 20 L3	071N0168[2]	
VD	VD1LL 2 4 (or 5)	2	➨	BFP 20 L3	071N0168	
VD	VD1LL 1 4 (or 5)	1	➨	BFP 20 L3	071N0168[2]	
VD	VD1RL 2 4 (or 5)	2	➨	BFP 20 R3	071N0169	
VD	VD1RL 1 4 (or 5)	1	➨	BFP 20 R3	071N0169[2]	
VD	VD1RR 2 4 (or 5)	2	➨	BFP 20 R3	071N0169	
VD	VD1RR 1 4 (or 5)	1	➨	BFP 20 R3	071N0169[2]	
VD	VD2LR 2 4 (or 5)	2	➨	BFP 10 L6	071N0272	
VD	VD2LR 1 4 (or 5)	1	➨	BFP 10 L6	071N0276	
VD	VD2LL 2 4 (or 5)	2	➨	BFP 20 L5	071N0126	Delta: 57 l/h; BFP: 40 l/h at 10 bar
VD	VD2LL 1 4 (or 5)	1	➨	BFP 20 L5	071N0126[2]	
VD	VD2RL 2 4 (or 5)	2	➨	BFP 10 R6	071N0273	
VD	VD2RL 1 4 (or 5)	1	➨	BFP 10 R6	071N0277	
VD	VD2RR 2 4 (or 5)	2	➨	BFP 20 R5	071N0129	Delta: 57 l/h; BFP: 40 l/h at 10 bar
VD	VD2RR 1 4 (or 5)	1	➨	BFP 20 R5	071N0129[2]	
VD	VD3LR 1 4 (or 5)	1	➨	BFP 10 L8	071N6111[3]	
VD	VD3LR 2 4 (or 5)	2	➨	BFP 10 L8	071N6111	
VD	VD3RL 1 4 (or 5)	1	➨	BFP 10 R8	071N6112[3]	
VD	VD3RL 2 4 (or 5)	2	➨	BFP 10 R8	071N6112	
VD	VD4LR 1 4 (or 5)	1	➨	BFP 10 L11	071N6107[3]	
VD	VD4LR 2 4 (or 5)	2	➨	BFP 10 L11	071N6107	

2) Important: These pumps are delivered for two-pipe operation. If the pumps are mounted on a one-pipe system, the changeover screw must be removed (fig. page 6) and the return port must be stopped with a metal plug.

3) A screw for 2-pipe operation is fitted under the cover of these pumps.
Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation.

Oil pumps – Delta

Delta			➨	Danfoss oil pumps		
Type	Code no.	1-2 pipe	➨	Type	Code no.	Remarks
VD	VD4RL1 4 (or 5)	1	➨	BFP 10 R11	071N6108[3]	**F84-220:**
VD	VD4RL2 4 (or 5)	2	➨	BFP 10 R11	071N6108	Indicates coil with loose cable and for
VM	VM1LR2 4 (or 5) F84-220	2	➨	BFP 21 L3	071N0170	220 V, 50 Hz.
VM	VM1LR1 4 (or 5) F84-220	1	➨	BFP 21 L3	071N0156	If using other voltages the following
VM	VM1LL2 4 (or 5) F84-220	2	➨	BFP 21 L3	071N0170	must be ordered extra:
VM	VM1LL1 4 (or 5) F84-220	1	➨	BFP 21 L3	071N0156	Coil no. 071N0061 for 110/120 V a.c. or
VM	VM1RL2 4 (or 5) F84-220	2	➨	BFP 21 R3	071N0171	Coil no. 071N0062 for 24 V a.c.
VM	VM1RL1 4 (or 5) F84-220	1	➨	BFP 21 R3	071N0157	
VM	VD1RR2 4 (or 5) F84-220	2	➨	BFP 21 R3	071N0171	
VM	VM1RR1 4 (or 5) F84-220	1	➨	BFP 21 R3	071N0157	
VM	VM2LR2 4 (or 5) F84-220	2	➨	BFP 11 L6	071N0270	
VM	VM2LR1 4 (or 5) F84-220	1	➨	BFP 11 L6	071N0274	
VM	VM2LL2 4 (or 5) F84-220	2	➨	BFP 21 L5	071N0172	Delta: 57 l/h; BFP:
VM	VM2LL1 4 (or 5) F84-220	1	➨	BFP 21 L5	071N0172[2]	40 l/h at 10 bar
VM	VM2RL2 4 (or 5) F84-220	2	➨	BFP 11 R6	071N0271	
VM	VM2RL1 4 (or 5) F84-220	1	➨	BFP 11 R6	071N0275	
VM	VM2RR2 4 (or 5) F84-220	2	➨	BFP 21 R5	071N0173	Delta: 57 l/h; BFP:
VM	VM2RR1 4 (or 5) F84-220	1	➨	BFP 21 R5	071N0173[2]	40 l/h at 10 bar
VM	VM3LR1 4 (or 5) F84-220	1	➨	BFP 11 L8	071N6109[3]	
VM	VM3LR2 4 (or 5) F84-220	2	➨	BFP 11 L8	071N6109	
VM	VM3RL1 4 (or 5) F84-220	1	➨	BFP 11 R8	071N6110[3]	
VM	VM3RL2 4 (or 5) F84-220	2	➨	BFP 11 R8	071N6110	

2) Important: These pumps are delivered for 2-pipe operation. If the pumps are mounted on a 1-pipe system, the changeover screw must be removed (fig. page 6) and the return port must be stopped with a metal plug.

3) A screw for 2-pipe operation is fitted under the cover of these pumps.
Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation.

Oil pumps – Delta

Delta			➨	Aktuelle Danfoss Typen		
Type	**Code no.**	**1-2 pipe**	➨	**Type**	**Code no.**	**Remarks**
VM	VM1LR2 4 (or 5) M8-220	2	➨	BFP 21 L3	071N0170	**M8-220:** Indicates coil with fixed cable and for 220 V, 50 Hz. Generally the following cable should be ordered here: Cable no. 071G0200 L = 500 mm, or Cable no. 071G0204 L = 710 mm Cable no. 071G0202 L = 280 mm If using other voltages the following must be ordered extra (only for BFP21): Coil no. 071N0061 for 110/120 V a.c. or Coil no. 071N0062 for 24 V a.c.
VM	VM1LR1 4 (or 5) M8-220	1	➨	BFP 21 L3	071N0156	
VM	VM1LL2 4 (or 5) M8-220	2	➨	BFP 21 L3	071N0170	
VM	VM1LL1 4 (or 5) M8-220	1	➨	BFP 21 L3	071N0156	
VM	VM1RL2 4 (or 5) M8-220	2	➨	BFP 21 R3	071N0171	
VM	VM1RL1 4 (or 5) M8-220	1	➨	BFP 21 R3	071N0157	
VM	VD1RR2 4 (or 5) M8-220	2	➨	BFP 21 R3	071N0171	
VM	VM1RR1 4 (or 5) M8-220	1	➨	BFP 21 R3	071N0157	
VM	VM2LR2 4 (or 5) M8-220	2	➨	BFP 11 L6	071N0270	
VM	VM2LR1 4 (or 5) M8-220	1	➨	BFP 11 L6	071N0274	
VM	VM2LL2 4 (or 5) M8-220	2	➨	BFP 21 L5	071N0172	Delta: 57 l/h, BFP: 40 l/h at 10 bar
VM	VM2LL1 4 (or 5) M8-220	1	➨	BFP 21 L5	071N0172[2)]	
VM	VM2RL2 4 (or 5) M8-220	2	➨	BFP 11 R6	071N0271	
VM	VM2RL1 4 (or 5) M8-220	1	➨	BFP 11 R6	071N0275	
VM	VM2RR2 4 (or 5) M8-220	2	➨	BFP 21 R5	071N0173	Delta: 57 l/h, BFP: 40 l/h at 10 bar
VM	VM2RR1 4 (or 5) M8-220	1	➨	BFP 21 R5	071N0173[2)]	
VM	VM3LR1 4 (or 5) M8-220	1	➨	BFP 11 L8	071N6109[3)]	
VM	VM3LR2 4 (or 5) M8-220	2	➨	BFP 11 L8	071N6109	
VM	VM3RL1 4 (or 5) M8-220	1	➨	BFP 11 R8	071N6110[3)]	
VM	VM3RL2 4 (or 5) M8-220	2	➨	BFP 11 R8	071N6110	

2) Important: These pumps are delivered for 2-pipe operation. If the pumps are mounted on a 1-pipe system, the changeover screw must be removed (fig. page 6) and the return port must be stopped with a metal plug.

3) A screw for 2-pipe operation is fitted under the cover of these pumps. Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation.

Oil pumps – Delta

Delta			➨	Danfoss oil pumps		
Type	Code no.	1-2 pipe	➨	Type	Code no.	Remarks
VMK	VMK1LR2 4-6 / F84-220	2	➨	BFP 52E L3	071N02201[4)]	**F84-220:** Indicates coil with loose cable and for 220 V, 50 Hz.
VMK	VMK1LR1 4-6 / F84-220	1	➨	BFP 52E L3	071N02201[2)4)]	
VMK	VMK1LL2 4-6 / F84-220	2	➨		No repl.*	
VMK	VMK1LL1 4-6 / F84-220	1	➨		No repl.*	
VMK	VMK1RL2 4-6 / F84-220	2	➨		No repl.*	BFP 52E/51 are not delivered for other voltages.
VMK	VMK1RL1 4-6 / F84-220	1	➨		No repl.*	
VMK	VMK1RR2 4-6 / F84-220	2	➨	BFP 52E R3	071N2203[4)]	
VMK	VMK1RR1 4-6 / F84-220	1	➨	BFP 52E R3	071N2203[4)]	
VMK	VMK2LR2 4-6 / F84-220	2	➨	BFP 51 L6	071N6204	
VMK	VMK2LR1 4-6 / F84-220	1	➨	BFP 51 L6	071N6204[2)]	
VMK	VMK2LL2 4-6 / F84-220	2	➨		No repl.*	* No replace: Delta has nozzles outlet to the right
VMK	VMK2LL1 4-6 / F84-220	1	➨		No repl.*	
VMK	VMK2RL2 4-6 / F84-220	2	➨		No repl.*	
VMK	VMK2RL1 4-6 / F84-220	1	➨		No rep.	
VMK	VMK2RR2 4-6 / F84-220	2	➨	BFP 51 R6	071N6221	
VMK	VMK2RR1 4-6 / F84-220	1	➨	BFP 51 R6	071N6221[2)]	
VMK	VMK3LR1 4 (or 5) M8-220	1	➨	BFP 51 L8	071N6222[3)]	
VMK	VMK3LR2 4 (odr 5) M8-220	2	➨	BFP 51 L8	071N6222	
VMK	VMK3RR1 4 (or 5) M8-220	1	➨	BFP 51 R8	071N6223[3)]	
VMK	VMK3RR2 4 (oder 5) M8-220	2	➨	BFP 51 R8	071N6223	

2) Important: These pumps are delivered for 2-pipe operation. If the pumps are mounted on a 1-pipe system, the changeover screw must be removed (fig. page 6) and the return port must be stopped with a metal plug.

3) A screw for 2-pipe operation is fitted under the cover of these pumps.
Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation.

4) The pump NC valve must be connected in parallel with the burner motor.

Oil pumps – Delta

Delta			➨	Danfoss oil pumps		
Type	**Code no.**	**1-2 pipe**	➨	**Type**	**Code no.**	**Remarks**
VMK	VMK1LR2 4-6 / M8-220	2	➨	BFP 52E L3	071N02201[4)]	**M8-220:**
VMK	VMK1LR1 4-6 / M8-220	1	➨	BFP 52E L3	071N02201[2)4)]	Indicates coil with fixed cable and for 220 V, 50 Hz.
VMK	VMK1LL2 4-6 / M8-220	2	➨		No repl.*	
VMK	VMK1LL1 4-6 / M8-220	1	➨		No repl.*	Generally the following cable should be ordered here:
VMK	VMK1RL2 4-6 / M8-220	2	➨		No repl.*	
VMK	VMK1RL1 4-6 / M8-220	1	➨		No repl.*	For NC:
VMK	VMK1RR2 4-6 / M8-220	2	➨	BFP 52E R3	071N2203[4)]	Cable no. 071G0200 L = 500 mm, or
VMK	VMK1RR1 4-6 / M8-220	1	➨	BFP 52E R3	071N2203[4)]	Cable no. 071G0202 L = 280 mm, or
VMK	VMK2LR2 4-6 / M8-220	2	➨	BFP 51 L6	071N6204[2)]	Cable no. 071G0204 L = 710 mm VMK
VMK	2LR1 4-6 / M8-220	1	➨	BFP 51 L6	071N6204	For NO:
VMK	VMK2LL2 4-6 / M8-220	2	➨		No repl.*	Cable no. 071G0201 L = 500 mm, or
VMK	VMK2LL1 4-6 / M8-220	1	➨		No repl.*	Cable no. 071G0203 L = 280 mm, or
VMK	VMK2RL2 4-6 / M8-220	2	➨		No repl.*	Cable no. 071G0205 L = 710 mm
VMK	VMK2RL1 4-6 / M8-220	1	➨		No repl.*	BFP 52E/51 are not delivered for
VMK	VMK2RR2 4-6 / M8-220	2	➨	BFP 51 R6	071N6221	other voltages.
VMK	VMK2RR1 4-6 / M8-220	1	➨	BFP 51 R6	071N6221[2)]	
VMK	VMK3LR1 4 (or 5) M8-220	1	➨	BFP 51 L8	071N6222[3)]	
VMK	VMK3LR2 4 (or 5) M8-220	2	➨	BFP 51 L8	071N6222	*No replace: Delta has nozzle outlet to the right
VMK	VMK3RR1 4 (or 5) M8-220	1	➨	BFP 51 R8	071N6223[3)]	
VMK	VMK3RR2 4 (or 5) M8-220	2	➨	BFP 51 R8	071N6223	

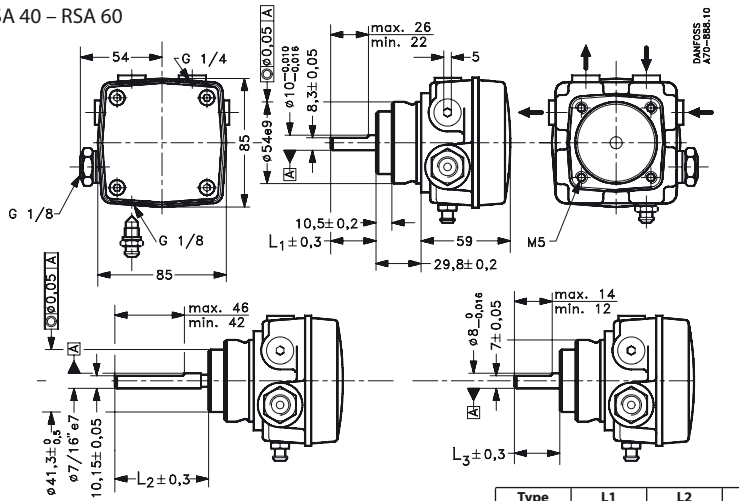
2) Important: These pumps are delivered for 2-pipe operation. If the pumps are mounted on a 1-pipe system, the changeover screw must be removed (fig. page 6) and the return port must be stopped with a metal plug.

3) A screw for 2-pipe operation is fitted under the cover of these pumps.
Without horseshoe washer: Pump set for 2-pipe operation. With horseshoe washer: Pump set for 1-pipe operation.

4) The pump NC valve must be connected in parallel with the burner motor.

Dimensions – RSA

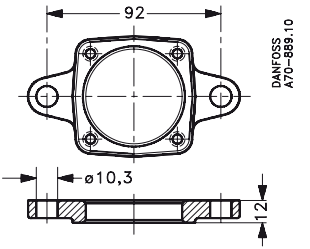
RSA 28 – RSA 40 – RSA 60



G 1/4 = R 1/4 =1/4RG =1/4 in BSPF

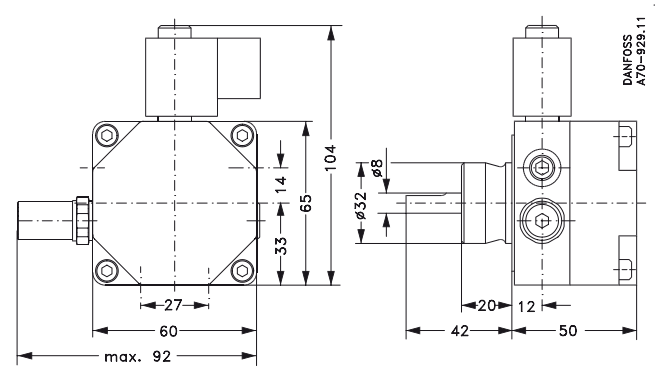
Type	L1	L2	L3
RSA 28	30,0	62,0	11,4
RSA 40	28,8	60,8	10,2
RSA 60	26,8	58,8	–

RSA 28 – RSA 40 – RSA 60
Flange 070-0211



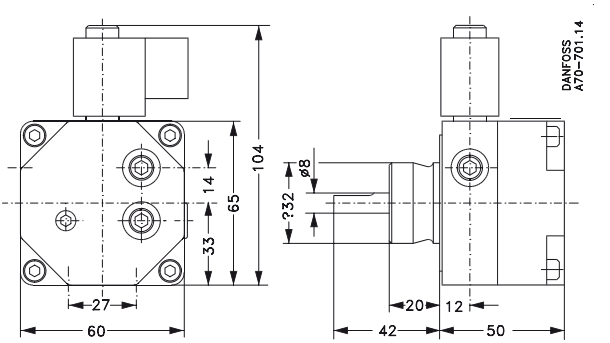
Dimensions – BFP 10/11

Type 3, 5, 6



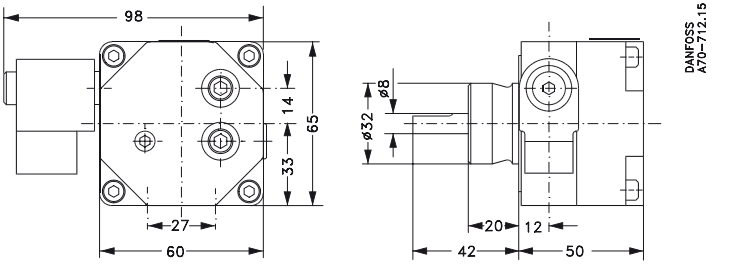
Dimensions – BFP 20/21

Type 3 and 5



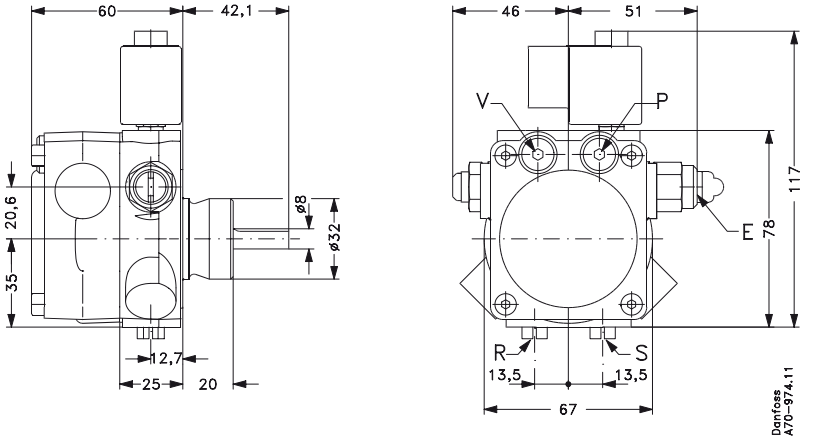
Dimensions– BFP 41

Type 3 and 5



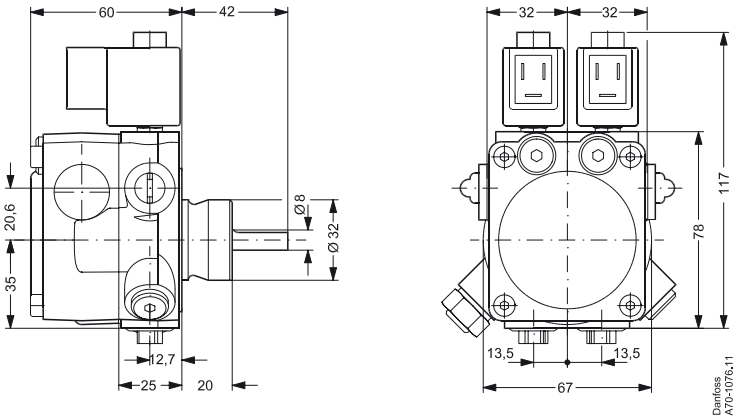
Dimensions – BFP 10/11

Type 8, 11 and 13



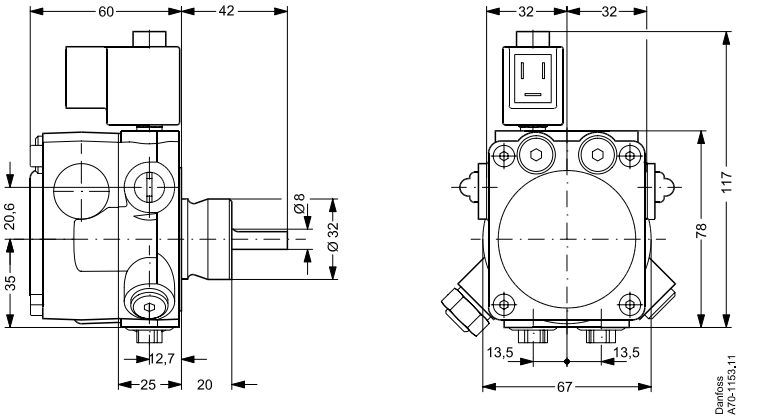
Dimensions – BFP 12

Type 8, 11 and 13



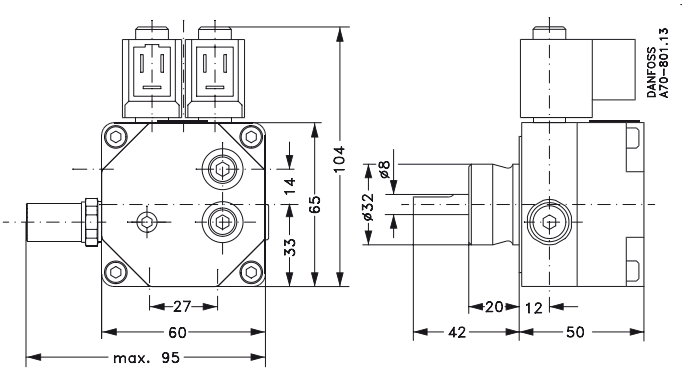
Dimensions – BFP 51

Type 6, 8, 11 and 13



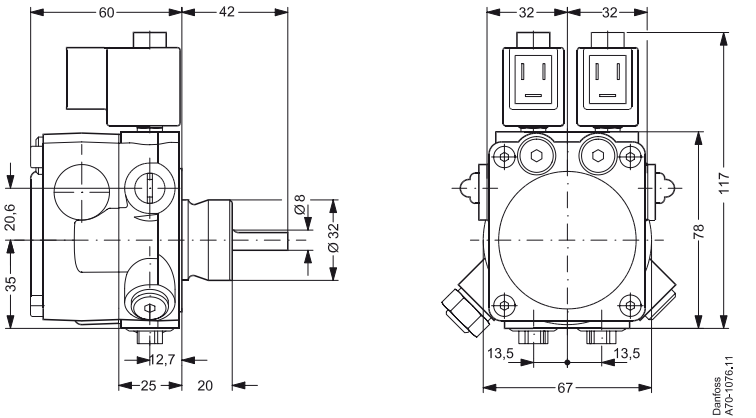
Dimensions – BFP 52 E

Type 3 and 5



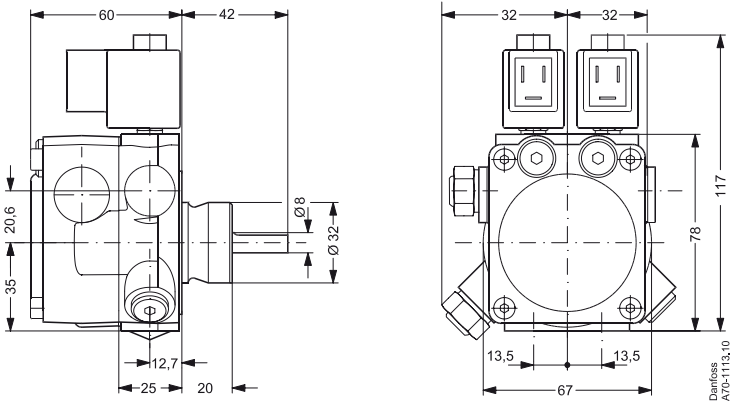
Dimensions – BFP 52

Type 6, 8, 11 and 13

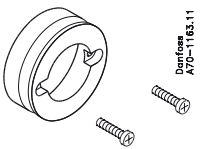


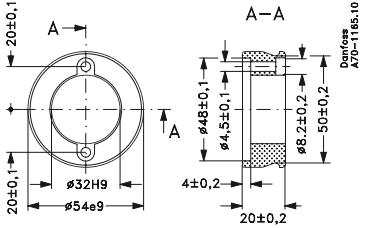
Dimensions – BFP 53

Type 6, 8, 11 and 13

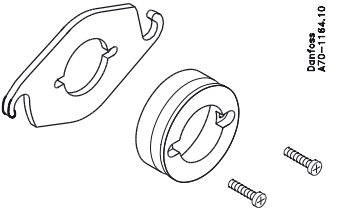


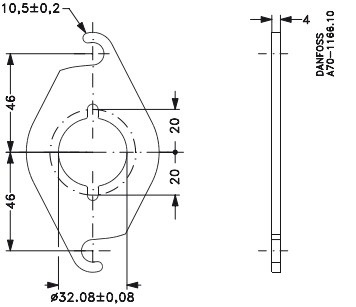
Screws and bush
Code no. 071B0011





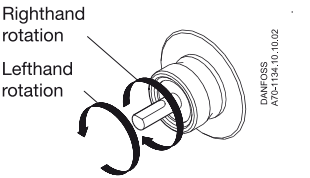
Screws, bush and flange
Code no. 071N0047



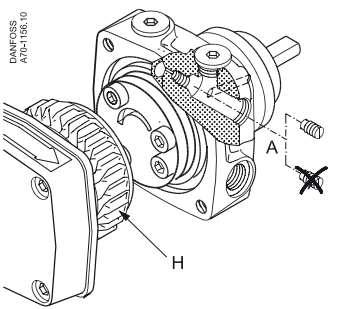


Changeover between 1- and 2-pipe operation. Filter replacement (H)

Note !
Shaft rotation, location of nozzle outlet and other connections are seen from shaft end.



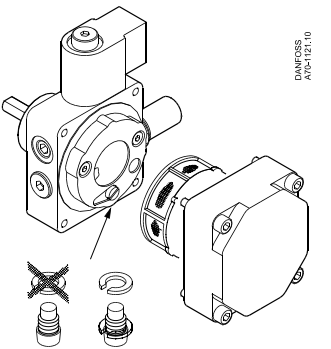
RSA



2-pipe operation:
Screw (A) fitted

1-pipe operation:
Without screw (A)

BFP 10/11 Type 3, 5, 6

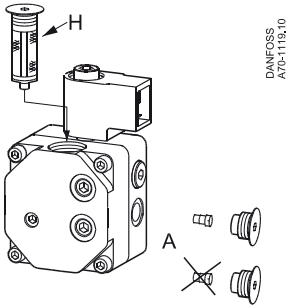


2-pipe operation:
Screw (A) without bypass washer

1-pipe operation:
bypass washer fitted on screw (A)

Changeover between 1- and 2-pipe operation. Filter replacement (H)

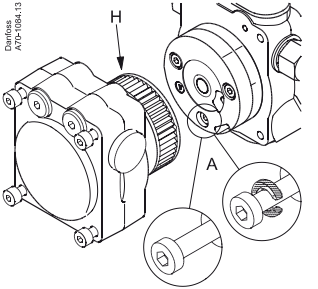
BFP 20/21 Type 3, 5, 6
BFP 41 Type 3, 5
BFP 52E Type 3, 5



2-pipe operation:
Screw (A) fitted

1-pipe operation:
Without screw (A)

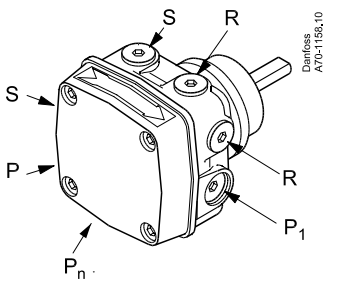
BFP 10/11 Type 8, 11, 13
BFP 12 Type 8, 11, 13
BFP 51 Type 6, 8, 11, 13
BFP 52 Type 6, 8, 11, 13
BFP 53 Type 6, 8, 11, 13



2-pipe operation:
Screw (A) without bypass washer

1-pipe operation:
bypass washer fitted on screw (A)

Connections – RSA



P_1 Pressure adjustment

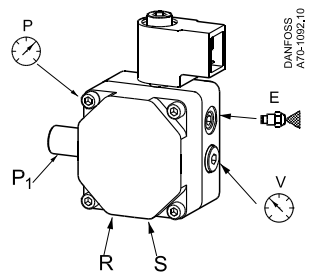
S Suction inlet G 1/4

R Return outlet G 1/4

P Pressure outlet G 1/8

P_n Pressure gauge port G 1/8

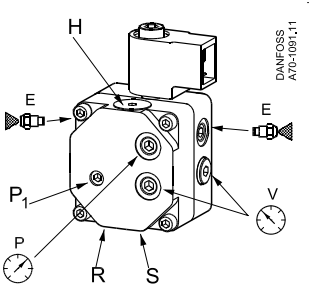
Type 3, 5 and 6



P_1	Pressure adjustment
S	Suction inlet G 1/4
R	Return outlet G 1/4
E	Nozzle outlet G 1/8
P	Pressure gauge port G 1/8
V	Vacuum gauge port G 1/8

Connections – BFP 20/21

Type 3 and 5



P_1 Pressure adjustment

S Suction inlet G 1/4

R Return outlet G 1/4

E Nozzle outlet G 1/8

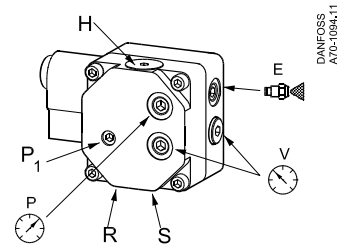
P Pressure gauge port G 1/8

V Vacuum gauge port G 1/8

H Filter

Connections – BFP 41

Type 3 and 5



P_1 Pressure adjustment

S Suction inlet G 1/4

R Return outlet G 1/4

E Nozzle outlet G 1/8

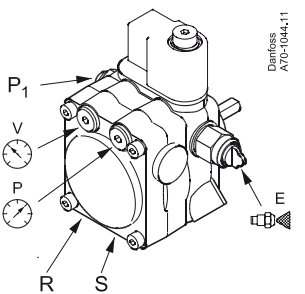
P Pressure gauge port G 1/8

V Vacuum gauge port G 1/8

H Filter

Connections – BFP 10/11

Typ 8, 11 and 13



P_1 Pressure adjustment

S Suction inlet G 1/4

R Return outlet G 1/4

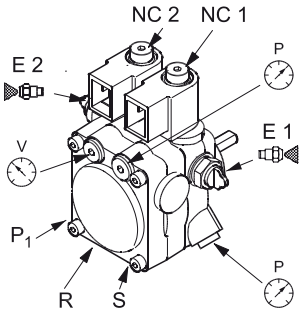
E Nozzle outlet G 1/8

P Pressure gauge port G 1/8

V Vacuum gauge port G 1/8

Connections – BFP 12

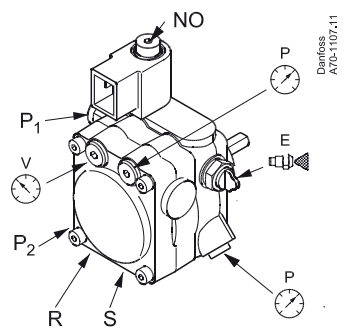
Type 8, 11 and 13



P_1	Pressure adjustment, stage 1
S	Suction inlet G 1/4
R	Return outlet G 1/4
E	Nozzle outlet G 1/8
P	Pressure gauge port G 1/8
V	Vacuum gauge port G 1/8

Connections – BFP 51

Type 6, 8, 11 and 13



P_1 Pressure adjustment

P_1 Pressure adjustment

S Suction inlet G 1/4

R Return outlet G 1/4

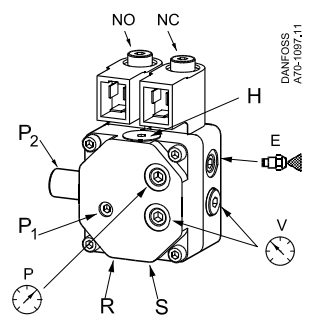
E Nozzle outlet G 1/8

P Pressure gauge port G 1/8

V Vacuum gauge port G 1/8

Connections – BFP 52E

Type 3 and 5



P_1 Pressure adjustment stage 1

P_2 Pressure adjustment, stage 2

S Suction inlet G 1/4

R Return outlet G 1/4

E Nozzle outlet G 1/8

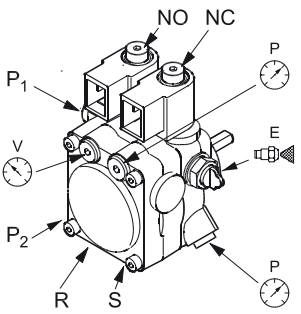
P Pressure gauge port G 1/8

V Vacuum gauge port G 1/8

H Filter

Connections – BFP 52

Type 6, 8, 11 and 13



Danfoss
A70-1073.12

P_1 Pressure adjustment, stage 1

P_2 Pressure adjustment, stage 2

S Suction inlet G 1/4

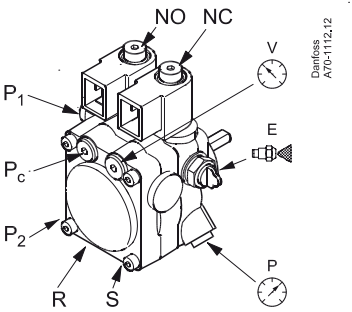
R Return outlet G 1/4

E Nozzle outlet G 1/8

P Pressure gauge port G 1/8

V Vacuum gauge port G 1/8

Type 6, 8, 11 and 13



P_1 Pressure adjustment, stage 1

P_2 Pressure adjustment, stage 2

P_c Dumping pressure outlet

S Suction inlet G 1/4

R Return outlet G 1/4

E Nozzle outlet G 1/8

P Pressure gauge port G 1/8

V Vacuum gauge port G 1/8

2. Oil burner controls

Contents

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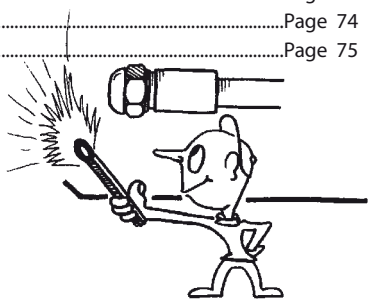
Conversion	BHO 1 WLE and BHO 4 WLE → BHO 70 series	Page 69
Conversion	BHO 21/25 and BHOV 22 → BHO 70 series	Page 70
Conversion	LOA → BHO 70 series	Page 71
Conversion	BHO → BHO	Page 72
Dimensions	BHO 70 series	Page 73
Dimensions	Service pack A	Page 74
Accessories	BHO	Page 75



Oil burner controls

Oil burner control conversions are given in the tables below:

The following old Danfoss oil burner controls can be replaced: types 57F, 57H, 57L and BHO.

According to the European standard EN 230: 2005, oil burner controls must in future have undervoltage protection. BHO 70 serie does incorporate this protection.

Therefore it is this oil burner control that most often replaces the old Danfoss types.

The overview is built up as follows:

- Column 1 always gives the old oil burner control types that are to be replaced.
- Column 2 gives the code numbers of the oil burner controls that are to be replaced.
- Column 4 gives the new types of Danfoss oil burner controls.
- Column 5 gives the corresponding code numbers.
- The last column gives the code numbers of the corresponding accessories.

Oil burner controls

Older Danfoss series		➡	Relevant Danfoss oil burner controls		
Type	Code no.	➡	Type	Code no.	Comments/Accessories
57F1	057F0001	➡	BHO 72.10	057H6102	+ 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272
57F3	057F0003	➡	BHO 72.10	057H6102	
57H1	057H0062	➡	BHO 72.10	057H6102	
57H1	057H0072	➡	BHO 72.10	057H6102	
57H1	057H1002	➡	BHO 72.10	057H6102	
57H3	057H1003	➡	BHO 72.10	057H6102	
57H1 WLE	057H0042	➡	BHO 74.10	057H6105	+ 057H7022 (see page 74)
57H1	057H0052	➡	BHO 72.10	057H6102	
57H2	057H0053	➡	BHO 72.10	057H6102	
57H2	057H0063	➡	BHO 72.10	057H6102	
57H3	057H1005	➡		No repl.	120 V
57H3	057H0054	➡	BHO 72.10	057H6102	+ 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272
57H3	057H0064	➡	BHO 72.10	057H6102	
57H5	057H0045	➡	BHO 74.10	057H6105	
57H5	057H0055	➡	BHO 72.10	057H6102	+ 057H7022 (see page 74)
57H5	057H0065	➡	BHO 72.10	057H6102	
57H6	057H0032	➡		No repl.	
57L 1	057L0001	➡	BHO 72.10	057H6102	
57L 1d	057L0002	➡	BHO 72.10	057H6102	+ 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272
57L 3	057L0003	➡	BHO 72.10	057H6102	Use motor starter on 380 V
57L 3d	057L0004	➡	BHO 72.10	057H6102	
BCG 1d	057L1001	➡		No repl.	
BCG 1d	057L1002	➡		No repl.	
BCG 1d	057L1003	➡		No repl.	
BCG 3,3d	057L1004	➡		No repl.	

Oil burner controls

Older Danfoss series		➡	Relevant Danfoss oil burner controls		
Type	**Code no.**	➡	**Type**	**Code no.**	**Comments/Accessories**
BCG 3.5d	057L1005	➡	No repl.		
BHO 1A	057H3013	➡	BHO 72.10	057H6102	
BHO 1B	057H3014	➡	BHO 72.10	057H6102	
BHO 1	057H3011	➡	BHO 72.10	057H6102	
BHO 1 WLE	057H3010	➡	BHO 74.10	057H6105	
BHO 1 WLE	057H3054	➡	BHO 74.10	057H6105	
BHO 3B	057H3018	➡	BHO 72.11	057H6103	
BHO 3B	057H3020	➡	BHO 72.11	057H6103	+ 057H7022 (see page 74)
BHO 4	057H4104	➡	BHO 72.10	057H6102	
BHO 4B	057H4144	➡	BHO 72.10	057H6102	
BHO 4 WLE	057H4110	➡	BHO 74.10	057H6105	
BHO 4.1	057H3012	➡	BHO 72.10	057H6102	
BHO 4.1B	057H3039	➡	BHO 72.10	057H6102	
BHO 4.1B	057H3044	➡	BHO 72.10	057H6102	
BHO 5	057H4105	➡	BHO 72.10	057H6102	+ 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272
BHO 5.1	057H3015	➡	BHO 72.10	057H6102	
BHO 6	057H3032	➡	No repl.		
BHO 11	057H2011	➡	BHO 72.10	057H6102	
BHO 11.1	057H2011	➡	BHO 72.10	057H6102	
BHO 11.1	057H2013	➡	BHO 72.10	057H6102	
BHO 11.1	057H2014	➡	BHO 72.10	057H6102	+ 057H7022 (see page 74)
BHO 12	057H2031	➡	BHO 72.10	057H6102	
BHO 12	057H2012	➡	BHO 72.10	057H6102	
BHO 12.1	057H2005	➡	BHO 72.10	057H6102	
BHO 12.1	057H2012	➡	BHO 72.10	057H6102	

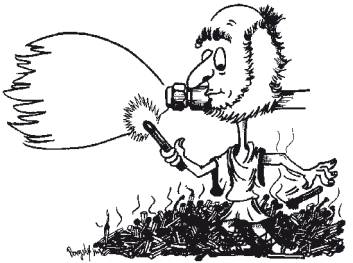
Oil burner controls

Older Danfoss series		➨	Relevant Danfoss oil burner controls		
Type	**Code no.**	➨	**Type**	**Code no.**	**Comments/Accessories**
BHO 15	057H2015	➨	BHO 72.10	057H6102	+ 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272
BHO 21	057H2042	➨	BHO 74.10	057H6105	+ 057H7022 (see page 74)
BHO 25	057H2045	➨	BHO 74.10	057H6105	+ 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272
BHOV 1	057H3016	➨	BHO 72.10	057H6102	+ 057H7022 (see page 74)
BHOV 4	057H3030	➨	BHO 72.10	057H6102	
BHOV 4A	057H3033	➨	BHO 72.10	057H6102	
BHOV 4B	057H3034	➨	BHO 72.10	057H6102	
BHOV 12.2	057H2030	➨	BHO 72.10	057H6102	
BHOV 12.2	057H2033	➨	BHO 72.10	057H6102	
BHOV 12.2	057H2034	➨	BHO 72.10	057H6102	
BHOV 22	057H2054	➨	BHO 74.10	057H6105	
FRA	086B0090	➨	LAE 10 LFE 10	Landis & Stäfa[2)]	Not supplied by Danfoss
FRU	086B0091	➨	LFE	Landis & Stäfa	Not supplied by Danfoss

3) Ionisation

Oil burner controls

Landis & Stäfa		Relevant Danfoss oil burner controls		
Type	Code no,	Type	Code no,	Comments/accessories
LOA 21.171B27		BHO 72.10	057H6102	
LOA 21.171B17		No repl.	-	110 V
LOA 21.173A27		BHO 73.10	057H6104	
LOA 22.171B27		BHO 72.10	057H6102	
LOA 22"DF"		BHO 72.10	057H6102	
LOA 24.171B27		BHO 72.10	057H6102	
LOA 24.571C27		BHO 71.11	057H6103	
LOA 44.252A27		BHO 74.10	057H105	
LMO 14.111B2		BHO 71.10	057H6101	
LMO 24.111B2		BHO 72.10	057H6102	
LMO 24.011B2		BHO 72.11	057H6103	
LMO 24.113B2		BHO 73.10	057H6104	
LMO 44.255C2		BHO 74.10	057H6105	



Oil burner controls

BHO			➨	BHO		
Type	Code no.	Comments/ accessories	➨	Type	Code no.	Comments/Accessories
BHO 61A	057H7031		➨	BHO 73.10	057H6104	
BHO 61	057H7032		➨	BHO 72.10	057H6102	
BHO 62	057H7034		➨	BHO 72.10	057H6102	
BHO 62D	057H7035		➨	BHO 72.10	057H6102	
BHO 61	057H7033	110 V	➨		Kein Ersatz	
BHO 64	057H7036		➨	BHO 72.10	057H6102	
BHO 64A	057H7030		➨	BHO 73.10	057H6104	
BHO 64.1	057H7037		➨	BHO 72.11	057H6103	

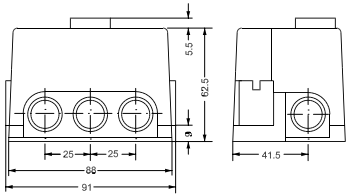
Defective components	Replacement components
Older oil burner controls	BHO 70 series + photo unit
BHO 60-Series	BHO 70 series only
Old LD/LDS 057H0020 etc. 057H2000 seriers	BHO 70 series + photo unit
New LD/LDS 057H7000 series	Photo unit only

In burners without solenoid valve the motor must be connnected to the solenoid valve terminals so that instead of prepurge, only pre-ignition takes place.

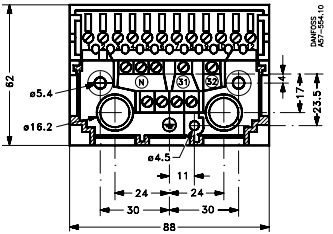
E.g. during maintenance work on the burner, if the oil burner control or photo unit shows defects it must be noted that there are different series of these components. In some circumstances both components must be replaced even though only one of them is defective. See table.

Units supplied with L&G (Stäfa) button placing only.

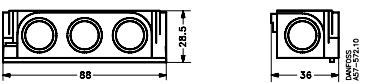
Dimensions



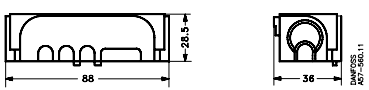
Oil burner control with base
Cable entry 057H7011



Base 057H7010.
The cross-hatched part can be replaced.



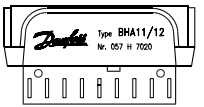
Cable entry 057H7011

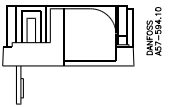


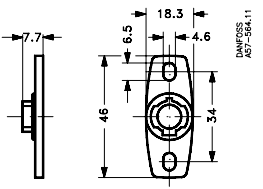
Cable entry 57H7012

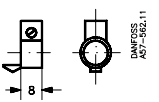
Dimensions – service pack A

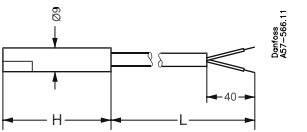
Code no. 057H7022











Type	Colour	H	L	Code no.
LD	Black	65.5	2000	057H7278
LD	Black	65.5	780	057H7279
LD	Black	50	500	057H7281
LDS	Red	50	500	057H7285
LDS	Red	65.5	520	057H7287
LDS	Red	105	350	057H7291
LDS	Red	65.5	800	057H7292
LDS	Light blue	50	500	057H7293
LDS	Light blue	65.5	600	057H7294

Accessories

Service pack A - code no. 057H7022 - contains the following components:

Designation	Code no.	Comments
BHA 11/12	057H7020	Adapter
Photo unit	057H7087	Elongated housing and high light sensitivity
Flange	057H7071	As the old LD unit
Clamping ring	057H7072	

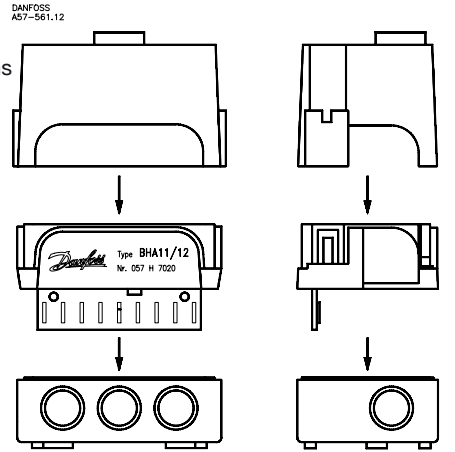
Accessories

When servicing, the photo unit must also be replaced if reliable operation is to continue.

Top cover with 12 connections

Adapter BHA 11/12

Base with 9 connections



Adapter + BHO 61, BHO 62, BHO 62D and BHO 64 have together the same height as BHO

3. Ignition units

Contents

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Conversion	52L -> EBI	Page 79
Dimensions	EBI	Page 81
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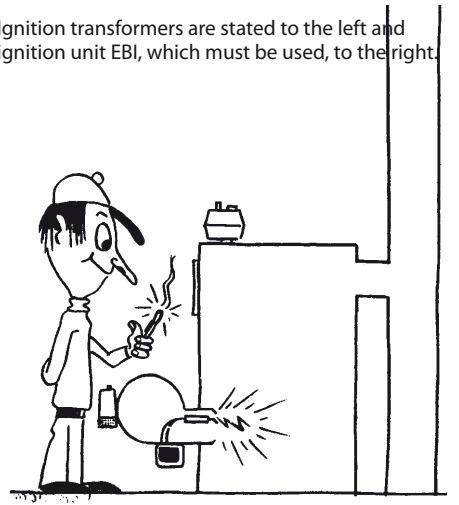
Ignition transformers/units

Introduction

When a Danfoss ignition transformer or an electronic ignition unit must be replaced, please proceed according to the following table.

Ignition transformers are stated to the left and ignition unit EBI, which must be used, to the right.



When replacing an ignition unit from a competitor, please take the below criterions into consideration:

In order to choose the right ignition unit, make sure that the ignition unit is designed for a supply voltage (primary voltage) of 220/230 V and that the ED of 33% at 60°C in 3 minutes is not exceeded.

Ignition transformers/units

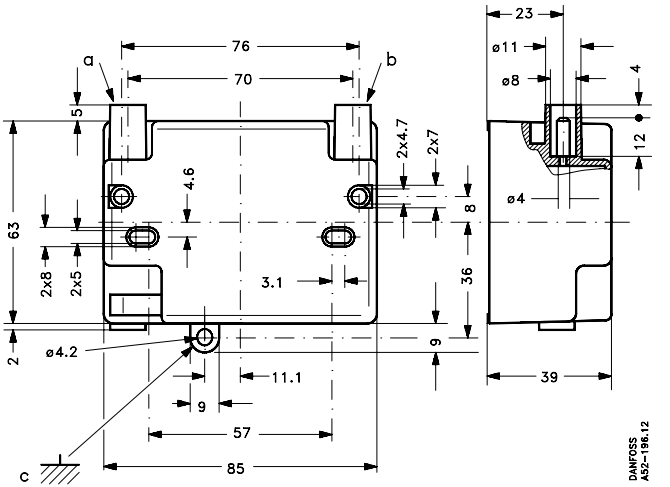
052L			➨	EBI		
Code no.	Primary voltage	Secondary voltage	➨	Type	Code no.	Comments/accessories
052L0000 to 052L0003	220	2-Pole	➨	EBI	052F0030	Primary cable 052F0102 and accessory 052F0061
052L0005						
052L0007 to 052L0009						
052L0014 to 052L0015						
052L0017						
052L0019 to 052L0020						
052L0023						
052L0028 to 052L0029						
052L0034						
052L0036 to 052L0039						
052L0041 to 052L0042						
052L0045 to 052L0048						
052L0050 to 052L0056						
052L0058 to 052L0061						
052L0064						
052L0066 to 052L0079						
052L0082						
052L0086 to 052L0087						
052L0089 to 052L0093						
052L0095 to 052L0098						
052L1003						
052L1011						
052L1050 to 052L1052						
052L1054 to 052L1057						
052L1075 to 052L1076						
052L1080						

Ignition transformers/units

052L			➨	EBI		
Code no	Primary voltage	Secondary voltage	➨	Type	Code no.	Comments/accessories
052L1085	220	2-Pole	➨	EBI	052F0030	Primary cable 052F0102 and accessory 052F0061
052L0018	220	1-Pole	➨	EBI1P	052F0040	Primary cable 052F0102 and accessory 052F0061
052L0026						
052L0030						
052L0040						
052L0049						
052L0065						
052L0088						
052L1058						
052L0016	100	2-Pole	➨	No repl.		
052L0044	100					
052L0006	110					
052L0062	110					
052L0013	115					
052L0021	115					
052L0099	120					
052L1001 to 052L1002	120					
052L1007 to 052L1008	120					
052L1010	120	1-Pole	➨	No repl.		
052L1012	120					
052L1019	120					
052L1021 to 052L1022	120					
052L0010	220	2-Pole + Ionisation	➨	No repl.		
052L0027	220					

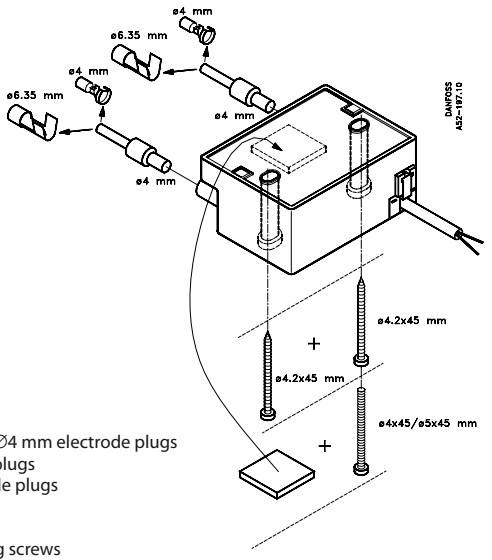
Dimensions

EBI	EBI M	EBI 1P	
a + b	a + b + c	b + c	a: Lefthand secondary connection b: Righthand secondary connection c: Earth terminal



Accessories

EBI service packs
Code no. 052F0061



Accessory set 052F0061
2 ignition cables with ∅4 mm electrode plugs
2 x ∅4 mm electrode plugs
2 x ∅6.35 mm electrode plugs
2 x M4 screws
2 x M5 screws
2 x 4.2 mm self-tapping screws
1 x double-sided adhesive pad

The EBI accessory set 052F0061 is used, for example, when replacing a Danfoss type 52L ignition transformer or another make.
In addition to the high-voltage cables and electrode plugs, the accessory set also contains an assortment of screws. When fitting EBI only one screw and the double-sided adhesive pad are necessary. EBI can thus be used in most existing installations without it being necessary to drill new holes in the burner.

EBI accessory set 052F0063
contains an EBI (052F0030) with primary cable (052F0102) and accessory set 052F0061.

4. Oil nozzles - conversion

Contents

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Marking ..... Page 87
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Nozzle capacity/reference pressure ..... Page 89
Nozzle capacity/reference pressure EN nozzles ..... Page 91

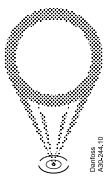
Type OD– oil nozzles for virtually all burner types in the market.

- Capacities from 0.3 to 35 USgal/h
- EN standardised from 1.46 to 6.55 kg/h
- 30°/45°/60°/80°spray angles
- H/S/B spray patterns
- Sinter bronze filter up to 1.75 USgal/Monel mesh filter up to 12 USgal/h. Larger capacities without filter.

Types HR and SR – round-head oil nozzles, identical to type OD as regards specifications.

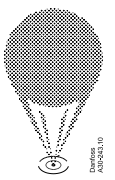
- Capacities from 0.3 to 2.50 USgal/h
- EN standardised from 1.46 to 6.55 kg/h
- 45°/60°/80°spray angles
- H/S spray patterns
- Sinter bronze filter

H



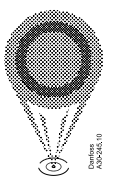
Hollow Spray Pattern
The hollow spray pattern is, represented in six nozzle types:
OD-H, HR, LE, EH, AH, KH

S



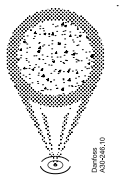
Solid Spray Pattern
The solid spray pattern is represented within the following nozzle types:
OD-S, SR, LE, ES, AS

B



Semi-Solid Spray Pattern
The semi-solid spray pattern is found in types:
OD-B and AB

N



Special Hollow Spray Pattern
This special hollow spray pattern,with slightly larger droplets in the middle, is only found in types LN and LN-LE.

Oil nozzles OD-H/-S/-B and HR/SR

USgal/h	30°	45°	60°	80°	EN kg/h
0.30			H S HR SR	H S HR SR	1.15
0.35			H S HR SR	H S HR SR	1.35
0.40		S SR	S SR	H S HR SR	1.46
0.45		S SR	H S HR SR	H S HR SR	1.66
0,50	H S	H S HR SR	H S HR SR	H S HR SR	1.87
0.55	H S	H S HR SR	H S HR SR	H S HR SR	2.11
0.60	H S	H S HR SR	H S B HR SR	H S B HR SR	2.37
0,65	H S B	H S B HR SR	H S B HR SR	H S B HR SR	2.67
0.75	H S B	H S B HR SR	H S B HR SR	H S B HR SR	2.94
0.85	H S B	H S B HR SR	H S B HR SR	H S B HR SR	3.31
1.00	H S B	H S B HR SR	H S B HR SR	H S B HR SR	3.72
1.10	H S	H S HR SR	H S HR SR	H S HR SR	4.24
1.20	H S	H S HR SR	H S HR SR	H S HR SR	4.45
1.25	H S B	H S B HR SR	H S B HR SR	H S B HR SR	4.71
1.35	H S B	H S B HR SR	H S B HR SR	H S B HR SR	5.17
1.50	H S B	H S B HR SR	H S B HR SR	H S B HR SR	5.84
1.65	H S	H S HR SR	H S HR SR	H S HR SR	6.08
1.75	H S	H S HR SR	H S HR SR	H S HR SR	6.55
2.00	H S B	H S B	H S B SR	H S B	7.42
2.25	H S B	H S B	H S B SR	H S B	8.35
2.50	H S B	H S B	H S B SR	H S B	9.29
2.75	H S B	H S B	H S B	H S B	10.5
3.00	H S B	H S B	H S B	H S B	11.6

These oil nozzles are manufactured in accordance with European standard EN 293

USgal/h	30°	45°	60°	80°	kg/h
3.50	S	S	S	S	12.9
3.75	B	S B	B	B	13.8
4.00		S	S	S	14.2
4.50		S B	S B	S B	16.1
5.00		S B	S B	S B	18.5
5.50		S B	S B	S B	20.9
6.00		S B	S B	S B	23.4
6.50		B	B	B	26.1
7.00			S		27.9
7.50		B	B	B	29.8
8.00			S		31.5
8.50		B	B	B	33.1
9.00			S		35.4
10.00		B	B	B	37.7
11.00		B	B	B	42.5
12.00		B	B	B	47.7
13.50		B	B	B	54.3
15.00		B	B	B	60.4
17.00			B	B	67.4
19.50			B	B	76.2
22.00			B	B	86.4
25.00			B	B	96.7
28.00			B	B	109.5
31.50		B	B	B	122.5
35.00		B			133.5

Danfoss oil nozzles OD – H/-S/-B can be used to replace the following nozzles of other makes:

Conversion to Danfoss nozzles		
Delavan A	➨	Danfoss H
Delavan B	➨	Danfoss S
Delavan W	➨	Danfoss B
Fluidics SF	➨	Danfoss S
Fluidics HF	➨	Danfoss H
Fluidics S	➨	Danfoss S
Fluidics H	➨	Danfoss H
Monarch PL	➨	Danfoss H/B
Monarch NS	➨	Danfoss H
Monarch PLP	➨	Danfoss B
Monarch AR	➨	Danfoss S
Monarch R	➨	Danfoss S
Hago B	➨	Danfoss S
Hago H	➨	Danfoss H
Hago SS	➨	Danfoss H/B
Hago P	➨	Danfoss S
Hago ES	➨	Danfoss S
Steinen PH	➨	Danfoss H/B
Steinen H, HT	➨	Danfoss H
Steinen SS	➨	Danfoss B
Steinen Q	➨	Danfoss S
Steinen S, ST	➨	Danfoss S

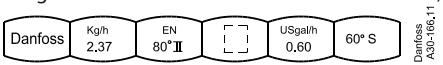
The values given are based on experience and should therefore only be considered as a guide

Nozzle markings

Easy to identify

Danfoss oil nozzles are imprinted with information, ensuring easy identification of capacity,spray pattern and angle.

Some types also carry normative information about the properties of the nozzle according to the norm concerned,e.g.EN or OK.



Imprinting on an oil nozzle, type OD,with an EN defined capacity of 2.37 kg/h [2)]

- EN indicates that the nozzle meets the requirements of the EN 293 and EN 299 norm.
- 80° II states the characteristics of the nozzle, i.e.atomising index and angle index according to the norm.
- The figures in the square brackets [ ] are a manufacturing code.
- The USgal/h-value states the capacity of the nozzle according to another definition point[1)], which was earlier widespread in the industry worldwide – and is still in use, especially in the service trade. To meet the requirements of this market,this imprint is maintained on all Danfoss oil nozzles.

[1)] Definition point: 7 bar, 3.4 cSt., 820 kg/m³

[2)] Definition point: 10 bar, 3.4 cSt., 840 kg/m³

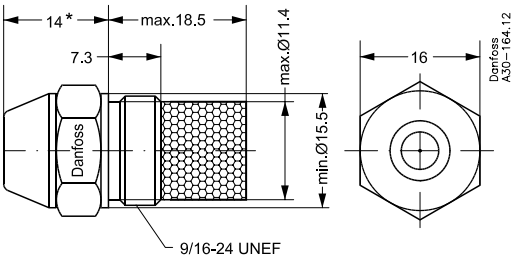
Note:

Danfoss oil nozzles are available with the: following filters:

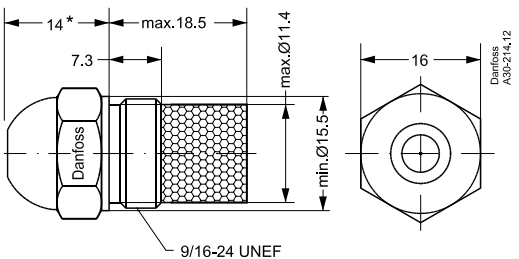
- Capacity range 0.30 to 0.35 USgal/h, 30 µm sinterbronze filter
- Capacity range 0.40 bis 0.85 USgal/h, 45 µm sinterbronze filter
- Capacity range 1.00 to 1.75 USgal/h, 75 µm sinterbronze filter
- Capacity range 2.00 to 11.00 USgal/h, 140 µm monel mesh filter
- Capacity range 12.0 USgal/h, and above without filter

Dimensions

OD-H / -S / -B



HR / SR



* EN- standard

Nozzle capacities

Nozzle capacities in USgal/h as a function of the atomising pressure with an oil of viscosity 3.4 mm^2/s and density 820 kg/m^3.

		Reference pressure			
6 bar GPH	**7 bar** **GPH**	8 bar GPH	10 bar GPH	12 bar GPH	14 bar GPH
0.28	**0.30**	0.32	0.36	0.39	0.42
0.32	**0.35**	0.37	0.42	0.46	0.49
0.37	**0.40**	0.43	0.48	0.52	0.56
0.42	**0.45**	0.48	0.54	0.59	0.64
0.46	**0.50**	0.53	0.60	0.65	0.71
0.51	**0.55**	0.59	0.66	0.72	0.78
0.55	**0.60**	0.64	0.72	0.78	0.85
0.60	**0.65**	0.69	0.78	0.85	0.92
0.69	**0.75**	0.80	0.90	0.98	1.06
0.79	**0.85**	0.91	1.02	1.11	1.20
0.92	**1.00**	1.07	1.19	1.31	1.41
1.01	**1.10**	1.17	1.31	1.44	1.55
1.11	**1.20**	1.28	1.43	1.57	1.70
1.16	**1.25**	1.34	1.49	1.64	1.77
1.25	**1.35**	1.44	1.61	1.77	1.97
1.39	**1.50**	1.60	1.79	1.96	2.12
1.52	**1.65**	1.76	1.97	2.16	2.33
1.62	**1.75**	1.87	2.09	2.29	2.47
1.85	**2.00**	2.14	2.39	2.62	2.83
2.08	**2.25**	2.41	2.69	2.95	3.18
2.31	**2.50**	2.67	2.99	3.27	3.54

Reference pressure

6 bar GPH	**7 bar** **GPH**	8 bar GPH	10 bar GPH	12 bar GPH	14 bar GPH
2.54	**2.75**	2.92	3.29	3.60	3.89
2.78	**3.00**	3.21	3.59	3.93	4.24
3.24	**3.50**	3.74	4.18	4.58	4.95
3.47	**3.75**	4.01	4.48	4.91	5.30
3.70	**4.00**	4.28	4.78	5.24	5.66
4.17	**4.50**	4.81	5.38	5.89	6.36
4.64	**5.00**	5.35	5.98	6.55	7.07
5.09	**5.50**	5.88	6.57	7.20	7.78
5.55	**6.00**	6.41	7.17	7.85	8.48
6.02	**6.50**	6.95	7.77	8.51	9.19
6.94	**7.50**	8.02	8.96	9.82	10.61
7.87	**8.50**	9.09	10.16	11.13	12.02
9.26	**10.00**	10.69	11.95	13.09	14.14
10.18	**11.00**	11.76	13.15	14.40	15.56
11.11	**12.00**	12.83	14.34	15.71	16.97
12.50	**13.50**	14.43	16.14	17.67	19.09
13.89	**15.00**	16.04	17.93	19.64	21.21
15.74	**17.00**	18.17	20.32	22.26	24.04
18.05	**19.50**	20.85	23.31	25.53	27.58
20.37	**22.00**	23.52	26.29	28.80	31.11
23.14	**25.00**	26.73	29.88	32.73	35.35
25.92	**28.00**	29.93	33.47	36.66	39.60
29.16	**31.50**	33.67	37.65	41.24	44.55

$$Q_2 \sim Q_1 \cdot \sqrt{\frac{P_2}{P_1}}$$

1 USgal ~ 3,785 l

Nozzle capacities

EN

Nozzle capacitities in kg/h as a function of the atomising pressure with an oil of viscosity 3.4 mm^2/s and density 840 kg/m^3.

			Reference pressure		
6 bar kg/h	7 bar kg/h	8 bar kg/h	**10 bar** **kg/h**	12 bar kg/h	14 bar kg/h
1.13	1.22	1.30	**1.46**	1.59	1.72
1.28	1.38	1.48	**1.66**	1.81	1,96
1.44	1.56	1.67	**1.87**	2.04	2.21
1.63	1.76	1.88	**2.11**	2.31	2.49
1.83	1.98	2.11	**2.37**	2.59	2.80
2.06	2.23	2.38	**2.67**	2.92	3.15
2.27	2.45	2.62	**2.94**	3.22	3.47
2.56	2.76	2.96	**3.31**	3.62	3.91
2.88	3.11	3.32	**3.72**	4.07	4.40
3.28	3.54	3.79	**4.24**	4.64	5.01
3.44	3.72	3.98	**4.45**	4.87	5.26
3.64	3.94	4.21	**4.71**	5.15	5.57
4.00	4.32	4.62	**5.17**	5.66	6.11
4.52	4.88	5.22	**5.84**	6.39	6.90
4.70	5.08	5.43	**6.08**	6.66	7.19
5.07	5.48	5.85	**6.55**	7.17	7.55

5. Oil preheaters

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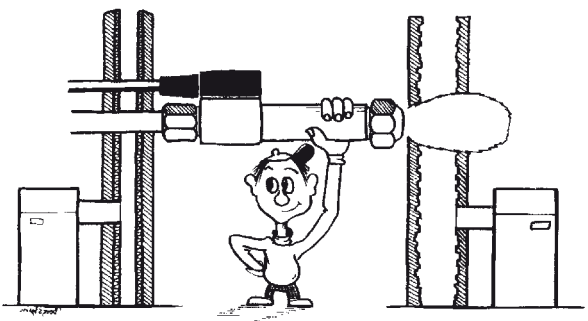


Oil preheaters

If the preheater needs replacing, consult the burner manufacturer. If a standard preheater is involved, it can also be purchased from an oil burner stockist or from Danfoss

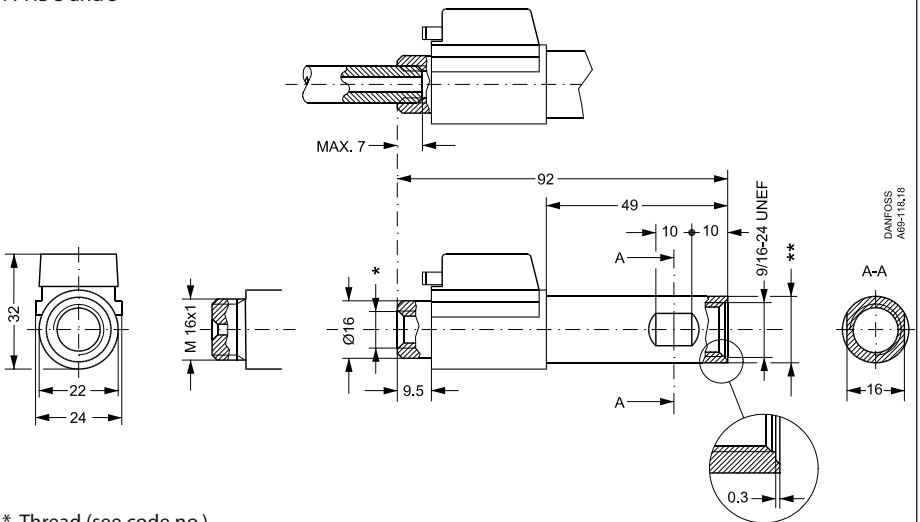
Danfoss Standard Types

Multi pack Code no.	Marked on product Code no.	Type	Connection	PTC (°C)	Thermostat	Neck diameter
030N2302	030N6302	FPHB 3	G 1/8	1 x 90	60/32	18.5
030N1201	030N6201	FPHB 5	M8 x 1	1 x 70	60/32	18.5
030N1202	030N6202	FPHB 5	G 1/8	1 x 70	60/32	18.5
030N1218	030N6218	FPHB 5	G 1/8	1 x 70	60/32	18.2
030N1223	030N6223	FPHB 5	M16 x 1	1 x 120	60/32	18.5
030N2057	030N6057	FPHB 3	G 1/8	1 x 50	60/32	18.5
030N1220	030N6220	FPHB 10	G 1/8	1 x 120	60/32	18.5
030N1224	030N6224	FPHB 10	M8 x 1	1 x 120	60/32	18.2
030N4101	030N6101	FPHB LE	G 1/8	1 x 70	60/32	18.5

LE valve	Description/Application
030N4013	For FPHB LE and nozzle holder for build-in LE valve

Dimensions

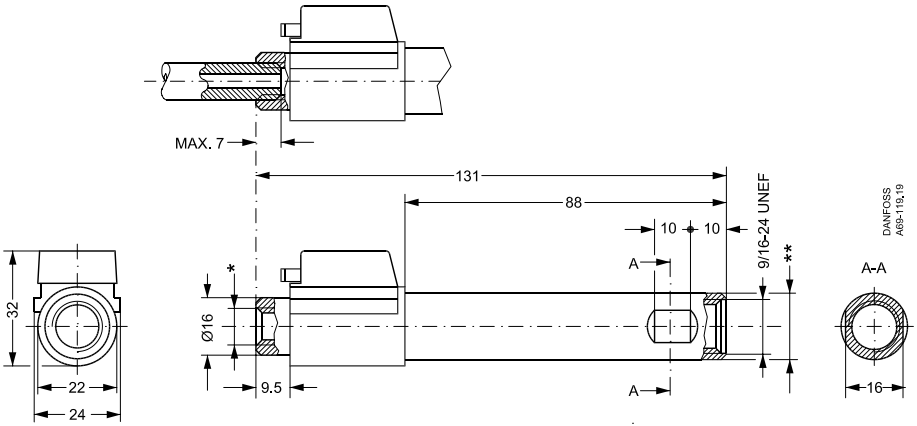
FPHB 3 and 5



* Thread (see code no.)
** Neck diameter (see code no.)

Dimensions

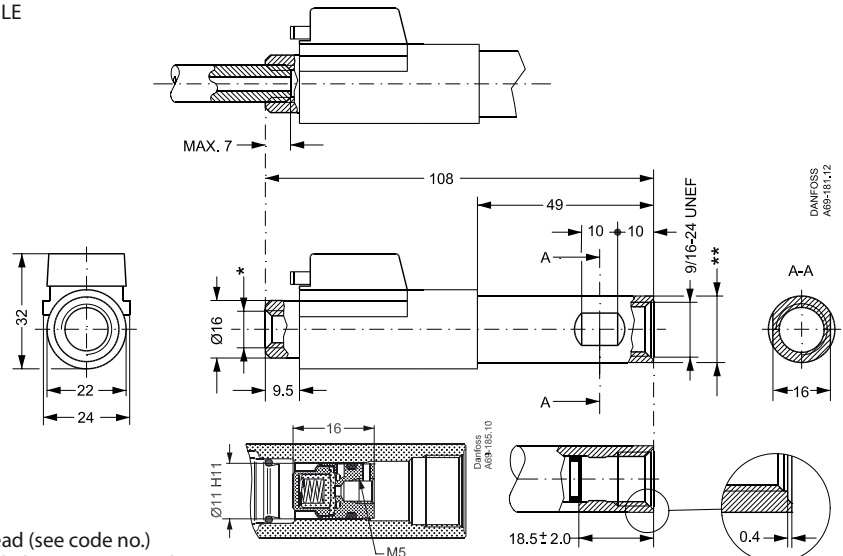
FPHB 10



* Thread (see code no.)
** Neck diameter (see code no.)

Dimensions

FPHB LE



* Thread (see code no.)
**Neck diameter (see code no.)

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Our product range for oil burners and boilers comprises: oil pumps, oil nozzles, preheaters, ignition units, burner controls and thermostats.

The Heart of Heating

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